

# MCQs for ENT

Specialist Revision Guide for the FRCS

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## Otorhinolaryngology- Head & Neck surgery

1. A 14 year old male presents with a history of chronic ear pain and discharge. He has a right perforated ear drum with a whitish protrusion through it. The most likely diagnosis
  - a. Acute mastoiditis
  - b. Acquired cholesteatoma
  - c. Ramsay hunt syndrome
  - d. Acute otitis media
  - e. Otitis Externa
  
2. A 45-year-old male presented to the Emergency Department complaining of a fish bone stuck in his throat. Despite soft tissue radiographs of the neck confirming the presence of the bone, it could not be detected during examination of the larynx with a laryngeal mirror. Eventually, endoscopic examination of the laryngopharynx allowed for the bone to be visualized and retrieved. Which structure may have been injured if the fish bone had pierced the mucous membrane?
  - a. Aryepiglottic fold
  - b. Internal laryngeal nerve
  - c. Larynx
  - d. Recurrent laryngeal nerve
  - e. Vocal cords
  
3. A 65-year-old presents to his GP with weakness along the right side of his mouth and lower lip. He states that he has difficulty in closing his mouth and is unable to move his lower lip. On examination, there is loss of sensation over the mandible and the chin on the right side. The patient states that he has noticed these symptoms since he underwent excision of his right submandibular gland for a malignant tumour 2 weeks previously. Which nerve is most likely to have been injured in this patient to cause these symptoms?
  - a. Mandibular branch of the trigeminal nerve
  - b. Glossopharyngeal nerve
  - c. Lingual nerve
  - d. Marginal mandibular branch of the facial nerve
  - e. Hypoglossal nerve

4. A 63-year-old hyperthyroid patient notices a new prominent nodule within the right lobe of her thyroid gland. A biopsy of the lump subsequently confirms malignancy. She then undergoes a total thyroidectomy. During the procedure, the surgeon's field of vision is intermittently obscured by considerable bleeding from the gland. Which of the following statements is correct regarding the vessels of the thyroid gland?
- a. The inferior thyroid artery is usually the first branch of the external carotid artery and supplies the inferior poles of the gland
  - b. The superior thyroid artery is the first branch of the internal carotid artery and descends to supply the superior poles of the gland
  - c. The inferior thyroid artery is the largest branch of the thyrocervical trunk arising from the subclavian artery
  - d. About 20% of people have an unpaired thyroid ima artery that usually arises directly from the brachiocephalic trunk
  - e. The middle thyroid arteries supply the middle of the lobes
5. A 30-year-old male presents with a right-sided frontal headache and right-sided periorbital oedema, erythema and sensory loss. Examination reveals a furuncle over his right cheek, a dilated right pupil that reacts sluggishly to light, and lateral gaze palsy of the right eye. What is the most likely diagnosis?
- a. Brain abscess
  - b. Cavernous sinus thrombosis
  - c. Orbital sepsis
  - d. Periorbital sepsis
  - e. Frontal sinusitis
6. A patient presents with left-sided facial weakness, loss of sensation to the anterior two-thirds of the tongue, and hyperacusis. Tear production is normal in both eyes and there is no vestibular dysfunction. At which of the following regions would a lesion to the facial nerve result in the symptoms described?
- a. Left stylomastoid foramen
  - b. Left parotid gland
  - c. Left facial canal
  - d. Left geniculate ganglion
  - e. Left cerebellopontine angle

7. A 45-year-old female presents to her GP with a slow-growing, firm, and painless mass in the lateral aspect of her cheek anteroinferior to her right ear. She has no associated lymphadenopathy or facial muscle distortion related to it. What is the most likely diagnosis?
- a. Adenoid cystic carcinoma
  - b. Mumps infection
  - c. Pleomorphic adenoma
  - d. Salivary gland calculus
  - e. Warthin's tumour
8. A 35-year-old female with a BMI of 36 experiences persistent gastro-oesophageal reflux symptoms despite lifestyle and dietary modification, and maximum anti-secretory therapy. Which of the following tests should first be performed before considering anti-reflux surgery in this patient?
- a. Cardiac sphincter manometry
  - b. Gastric emptying study
  - c. Oesophageal motility study
  - d. Oesophageal pH monitoring off therapy
  - e. Oesophageal pH monitoring on therapy
9. A 40-year-old man presents to the neck lump clinic with a prominent solitary thyroid nodule. The fine-needle aspirate cytology performed shows features similar to benign adenomatous hyperplasia. He subsequently undergoes a thyroid lobectomy and the histology of the surgical specimen confirms a diagnosis of follicular carcinoma. Which of the following is a characteristic of follicular carcinoma?
- a. It arises from the parafollicular cells of the thyroid gland
  - b. Fine-needle aspiration cytology can sufficiently differentiate it from benign adenomatous hyperplasia
  - c. The majority of such cases are multifocal
  - d. Metastasis tends to occur via the bloodstream to the bone
10. Which one of the following structures lies parallel and immediately deep to the carotid sheath in the neck?
- a. Vagus nerve
  - b. Recurrent laryngeal nerve
  - c. Scalenus anterior
  - d. Trachea
  - e. Sympathetic trunk



11. A 17-year-old cricketer is struck on the outside of his right cheek by a cricket ball travelling at high speed. When he is examined at the scene by the attending medic, his cheek appears to be flat and depressed. He soon develops swelling and ecchymosis around his right eye and complains of dizziness, diplopia of the right eye and numbness over his cheek. What is the most likely injury described in this scenario?
- a. Retinal detachment
  - b. Intracranial haemorrhage
  - c. Blunt trauma to parotid gland
  - d. Maxillary fracture
  - e. Zygomatic fracture
12. In view of the possible operative damage to the recurrent laryngeal nerve during thyroid surgery, a patient is requested to undergo laryngoscopy as part of his preoperative assessment to determine the baseline function of his vocal cords. Which muscle is primarily responsible for the abduction of the vocal cords?
- a. Cricothyroid muscle
  - b. Lateral cricoarytenoid muscle
  - c. Posterior cricoarytenoid muscle
  - d. Thyroarytenoid muscle
  - e. Transverse arytenoid muscle
13. A 63-year-old lady undergoes a parathyroidectomy for the treatment of primary hyperparathyroidism under the care of the endocrine surgeons. Intraoperatively, she is found to have a right inferior parathyroid adenoma, which is excised. On the ward round the following morning, she complains of hoarseness in her voice which she did not experience prior to the operation. What is the most likely cause for her symptoms?
- a. Intubation
  - b. Unilateral damage to the external laryngeal nerve
  - c. Unilateral damage to the recurrent laryngeal nerve
  - d. Bilateral damage to the recurrent laryngeal nerve
  - e. Haematoma of the neck

14. An adolescent boy is seen in the Emergency Department after experiencing a sharp pain in his throat after eating bony fish. The ENT surgical registrar on call manages to retrieve the fish bone non-surgically but is unsure if there may have been damage to the mucosa of the piriform fossa. Which nerve constitutes the afferent (sensory) supply to the piriform fossa?
- a. External laryngeal nerve
  - b. Glossopharyngeal nerve
  - c. Hypoglossal nerve
  - d. Internal laryngeal nerve
  - e. Recurrent laryngeal nerve
15. Which of the following is true about the parotid gland?
- a. The parotid gland is a mucus secreting gland contained within the parotid sheath
  - b. The gland is divided into two lobes in relation to the retromandibular vein
  - c. Its autonomic nerve supply is via the facial nerve, which passes through the gland
  - d. The mandibular branch of the facial nerve lies superficial to the parotid gland
  - e. The parotid duct drains into the buccal mucosa opposite the lower second molar
16. A 29-year-old woman is referred by her GP with a 3-month history of a painless lump in the anterior aspect of the neck. She does not describe any hoarseness of voice. Examination reveals a lump in the left anterior triangle, which moves up and down with swallowing. FNA cytology of the lump reveals nuclear grooves and intranuclear inclusions. What is the most likely diagnosis?
- a. Follicular adenoma
  - b. Follicular carcinoma
  - c. Papillary carcinoma
  - d. Medullary carcinoma
  - e. Anaplastic carcinoma

17. A 30-year-old woman presents with a 6-week history of weight loss and anxiety. She takes no regular medication and has smoked 10 cigarettes daily for 6 years. Examination reveals a resting heart rate of 108/min, a fine resting tremor of the hands, lid lag, and periorbital oedema. A diffusely enlarged diffuse goitre is noted, with a non-tender 2 cm nodule on the right thyroid lobe. No obvious lymphadenopathy is noted but a thyroid bruit is found on auscultation. Initial blood tests reveal a free T4 level of 31.5 mmol/L (10–22), TSH level of 0.10 mU/L (0.4–5), and the presence of thyroid peroxidase antibodies. Radioisotope scanning of the thyroid reveals a diffuse uptake with no uptake in right nodule. What is the most likely diagnosis in this patient?
- a. De Quervain's thyroiditis
  - b. Follicular carcinoma of the thyroid
  - c. Graves' disease
  - d. Papillary carcinoma of the thyroid
  - e. Toxic multinodular goiter
18. A previously fit and healthy 37-year-old lady undergoes a prolonged laparoscopic cholecystectomy due to multiple equipment-related complications. In the immediate postoperative period, she develops biphasic stridor and cyanosis upon extubation, and is therefore immediately re-intubated. The surgical registrar present at the time diagnoses this as possible bilateral vocal cord paralysis and prepares to perform an open tracheostomy. Which of the following structures are not encountered during this procedure?
- a. Deep investing fascia
  - b. Platysma
  - c. Strap muscles (sternothyroid and sternohyoid)
  - d. Superior thyroid artery
  - e. Thyroid isthmus
19. A 30-year-old male undergoes a right superficial parotidectomy. Eight months later he presents to the outpatient department complaining of flushing and sweating of the right side of his face on eating. He is diagnosed as having Frey's syndrome and is listed for botulinum toxin injections. Misdirected re-innervation of which nerve is responsible for this syndrome?
- a. Greater auricular nerve
  - b. Facial nerve
  - c. Trigeminal nerve
  - d. Auriculotemporal nerve
  - e. Greater petrosal nerve

# Otolaryngology (ENT) Clerkship

## Multiple Choice Examination

### Section 1

Theme: Otagia

**A 4-year-old boy is taken to the local children's hospital, with a history of left ear ache and vomiting for 1 day. On inspection His pinna is pushed downwards and forwards and a small perforation leaking pus is noted in the pars tensa. His temperature is 39.2C.**

1. What is the next best step in the management of this patient?

- a. Oral Amoxicillin
- b. Emergency Mastoidectomy
- c. PO Amoxil and clavulanic acid
- d. Admission and IV antibiotics
- e. Allow home on Children's cetamol

2. What is the Most likely diagnosis?

- a. Otitis Media with effusion
- b. Acute Suppurative Otitis Media
- c. Acute Bacterial Mastoiditis
- d. Acute viral Otitis media
- e. Acute fungal otitis externa

**A 38-year-old man with diabetes mellitus type 2 has just returned from holiday where he went swimming every day. For the last few days he has had irritation in both ears. He has no facial paresis, but his right ear is hot, red, and acutely painful. The external meatus appears swollen, but his tympanic membrane is mobile.**

3. What is the most likely diagnosis?

- a. Malignant otitis externa
- b. Furuncle in the external meatus
- c. Diffuse Otitis Externa
- d. Acute otitis Media
- e. Ramsy-Hunt syndrome

## Otolaryngology (ENT) Clerkship

### Multiple Choice Examination

#### Theme: Stridor in Children

**A 3-year old previously healthy child has a 1-day history of severe pain in the throat, breathing difficulties and fever. An ill-looking child is seen drooling and prefers to lean forwards on her mother's lap.**

4. The most likely cause of her stridor is?
  - a. Foreign body Aspiration
  - b. Croup (laryngo-tracheobronchitis)
  - c. Acute inflammation of the supraglottis
  - d. Juvenile Respiratory Papillomatosis
  - e. Acute Tonsillitis
5. What is the appropriate initial management?
  - a. Emergency tracheostomy
  - b. Lateral Neck X-ray to check for thumb sign
  - c. Vaccination against type B haemophilus Influenzae
  - d. Intubation under anaesthesia
  - e. IV antibiotics

**A 5-year-old girl presented to the Accident and emergency department with stridor. She has a prior history hoarseness for 6 months. The senior anesthetist is unable to intubate and thus An emergency tracheostomy is performed.**

6. What is most likely to be seen while investigating the cause of stridor in this child?
  - a. Unilateral Tonsillar hypertrophy
  - b. Laryngeal web
  - c. Vocal cord palsy
  - d. Multiple cauliflower lesions on the glottis
  - e. Subglottic Stenosis
7. A few days later you are called to the ward by nurses because the child has now started to bleed profusely from the tracheostomy site. The most likely cause is
  - a. Trachea-oesophageal fistula
  - b. Hemothorax
  - c. Erosion into the common carotid artery
  - d. Tracheo-innominate fistula
  - e. Granulation polyps

# Otolaryngology (ENT) Clerkship

## Multiple Choice Examination

Theme: Head and Neck Malignancies

**A 36-year-old man comes to the ENT clinic for evaluation of an anterior, neck mass that has been present for 6 months. There is mild retrosternal extent and the mass moves on swallowing. Several 2-3cm swellings are also noted along the anterior border of the left sternocleidomastoid muscle. Indirect mirror laryngoscopy shows left vocal fold immobility. Serum TSH is however within normal limits**

8. Which of the following is the most appropriate initial investigation?
  - a. Computed tomography of the neck and chest
  - b. Ultrasound guided Core Needle biopsy
  - c. Excisional Lymph node biopsy
  - d. Radioiodine thyroid scan
  - e. Fine needle aspiration cytology
  
9. **A biopsy is performed, and the results show atypical follicular cells with a length twice their width along with intra-nuclear grooving, psammoma bodies and “orphan annie nuclei”. Genetic testing shows the presence of the “BRAF mutation”. These findings are most consistent with a diagnosis of**
  - a. Medullary thyroid cancer
  - b. Hurthle cell Carcinoma
  - c. Tall cell variant of papillary Carcinoma
  - d. Atypia of undetermined significance
  - e. Anaplastic thyroid carcinoma
  
10. The most appropriate treatment strategy for this patient is
  - a. Palliative Chemoradiotherapy
  - b. Left hemithyroidectomy and neck dissection
  - c. Near total thyroidectomy
  - d. Total Thyroidectomy, selective neck dissection and postoperative I<sup>131</sup>
  - e. Adjuvant Chemoradiation followed by total thyroidectomy and radical Neck dissection
  
11. **Your consultant ask that you scrub in to assist her in performing a left hemithyroidectomy in a woman with a follicular neoplasm. During the procedure she ask you to identify the nerve which eventually supplies motor innervation to the posterior cricoarytenoid muscle of the larynx. The nerve can be located as**
  - a. It descends in close relation to the superior thyroid artery
  - b. It enters the lateral portion of the thyrohyoid membrane
  - c. It is posterior to the carotid sheath
  - d. It ascends in the trachea-oesophageal groove
  - e. It passes parallel to the inferior thyroid artery

## Otolaryngology (ENT) Clerkship

### Multiple Choice Examination

**A 50-year-old man presents with a 5-month history of left ear ache and sore throat. He also admits to having weight loss, dysphagia and a sensation of a lump in his throat. He denies a history of smoking or alcohol use. Biopsy of the lesion shows atypical cells of squamous cell origin. PCR Analysis suggest the presence of proteins E6 & E7**

12. The diagnosis that is most consistent with this patient is a malignancy of
- Maxillary Sinus
  - Nasopharynx
  - Laryngeal vocal folds
  - Base of tongue and Tonsils
  - Submandibular gland

#### **Theme: Hoarseness**

13. A 52-year-old man whose voice became hoarse after thyroid surgery 1 week ago shows no improvement. Which of the following structures was most likely injured during surgery?
- Unilateral external laryngeal nerve
  - Bilateral superior laryngeal nerves
  - Bilateral recurrent laryngeal nerves
  - Unilateral recurrent laryngeal nerve
  - Unilateral internal branch of the superior laryngeal nerve

**A 49-year-old man with a chronic history of smoking cigarettes and alcohol abuse presents with progressive hoarseness and weight loss for 6 months. He also recalls an episode of coughing up blood streaked sputum last week.**

14. The next best step in the management of this patient is
- CT neck and chest
  - Laryngeal biopsy under general anaesthesia
  - Chest X-ray
  - Indirect mirror laryngoscopy
  - Neck ultrasound
15. Appropriate investigations yield the presence of a lesion on the left cord which extends to the vestibular fold. Both cords are mobile. A 2 cm jugulodigastric lymph node is present but there is no evidence of distant metastases. The most likely TNM staging of is
- T1a, N0, M0
  - T1b, N0, M0
  - T2, N1, M0
  - T2, N2, M0
  - T3, N0, M0

#### **Theme: Vertigo**

## Otolaryngology (ENT) Clerkship

### Multiple Choice Examination

**A 43-year-old woman complains of a sensation that her bed room was “spinning around her” when she attempted to get out of bed this morning. This episode lasted 30-45 seconds. She had a similar episode of dizziness last week when she tried to collect something from the top Kitchen cupboard. She has occasional headaches and last week she had a mild upper respiratory tract infection.**

16. Which of the following is most likely to be an associated finding in this patient?
- a. Lateralization to the unaffected side on weber testing
  - b. A negative Dix-Hall Pike test
  - c. Low frequency hearing loss on pure tone audiometry
  - d. A cerebellopontine angle lesion on MRI
  - e. Rotational nystagmus when reclined from a seated position

**A 30-year-old lady is referred to the Outpatient clinic with right sensorineural hearing loss, facial numbness, vertigo and tinnitus. On exam she has a decreased corneal reflex and numbness of the posterior aspect of the right external auditory canal.**

17. The most probable diagnosis is?
- a. Meniere disease
  - b. Benign positional vertigo
  - c. Vestibular schwannoma
  - d. Ramsay hunt syndrome
  - e. Otosclerosis

**A 45-year-old woman comes with recurrent episodes of vertigo, tinnitus and pressure in the ear lasting anywhere between 2-6 hours. Occasionally during similar episodes, she has decreased hearing in the left ear along with severe nausea and vomiting. She denies any history of trauma and she has a negative VDRL result.**

18. Which of the following is most likely to be an associated finding in this patient?
- a. Conductive hearing loss
  - b. low frequency hearing loss
  - c. Positive dix hall pike maneuver
  - d. Type C tympanogram
  - e. Positive Schwartz sign



## Otolaryngology (ENT) Clerkship Multiple Choice Examination

### Theme: Salivary Glands

**A 45-year-old man has a pre-auricular mass on the right side of his face. The mass has been present for 3 months but recently has become visibly larger and is now painful. He is unable to whistle or fully close his right eye. On oral exam blood is seen from a small area opposite the 2<sup>nd</sup> upper molar.**

19. What is the most likely diagnosis?
- a. A minor salivary gland adenoid cystic carcinoma
  - b. Wharths tumour of the parotid gland
  - c. Acinic cell carcinoma
  - d. Carcinoma Ex-pleomorphic adenoma
  - e. Parotid Mucoepidermoid carcinoma

**A 60-year-old man presents with a painful swelling under his right jaw after eating a large meal. On bimanual palpation a mass is palpated on the under side of his tongue. An open mouth x-ray is requested which shows calcifications next to the mandible**

20. The most likely cause is
- a. Plunging Rannula
  - b. Squamous cancer of the floor of mouth
  - c. Calculus in Wharton's duct
  - d. Stricture of Stenson's duct
  - e. Submandibular gland malignancy

**A 45-year-old gentleman is taken to the operating theatre to have excision of a right submandibular pleomorphic adenoma.**

21. Which of the following structures is most at risk of being damaged at the beginning of the procedure?
- a. The lingual nerve
  - b. The hypoglossal nerve
  - c. Marginal mandibular nerve
  - d. Submandibular duct
  - e. Glossopharyngeal nerve
22. When performing a superficial parotidectomy;
- a. A modified weber-ferguson incision is utilised
  - b. the tympano-mastoid suture is the most consistent landmark when trying to locate the facial nerve trunk
  - c. the facial nerve must be resected during surgery to remove any adherent foci of pleomorphic adenoma
  - d. bleeding may be commonly encountered from the internal jugular vein
  - e. creating a thin skin flap will decrease the risk of frey's syndrome

### Theme: Facial weakness

## Otolaryngology (ENT) Clerkship

### Multiple Choice Examination

**A 25-year-old man awoke to find that he is unable to close his left eye and is unable to keep liquids from leaking out of his mouth. On inspection He Has a flattened nasolabial fold and is unable to wrinkle the forehead on his left side. His head and neck examination is unremarkable and he has no other focal neurological deficits**

23. Which of the following is CORRECT, regarding his most likely diagnosis?
- a. Diagnosis of exclusion
  - b. Treatment is with antibiotics
  - c. Facial nerve surgery is usually required
  - d. 90% of cases do not show spontaneous resolution
  - e. Anti-viral and Steroids medications are not recommended

**A 70-year-old woman has weakness of the left side of her face. She has had a painful ear for 48 hours. There are vesicles in the left ear canal and on the ear drum.**

24. Which of the following is associated with this condition?
- a. Paracoccus willisii
  - b. Furunculosis of the external auditory meatus
  - c. osteomyelitis of the temporal bone caused by pseudomonas
  - d. Paraganglioma arising from the middle ear
  - e. Reactivation of a Latent viral infection in the geniculate ganglion

## Otolaryngology (ENT) Clerkship Multiple Choice Examination

### Theme: Tonsils and Adenoids

**A 23-year-old woman is referred to the ENT specialist for evaluation. After taking a full history and examination, he considers performing a tonsillectomy.**

25. Which of the following would most likely influenced his decision to operate?
- a. a single episode of peritonsillar abscess requiring incision and drainage
  - b. grade two heart murmur on auscultation
  - c. Unilateral tonsillar enlargement with persistent cervical lymphadenopathy
  - d. two episodes of acute tonsillitis occurring within the past 3 years
  - e. A past medical history of febrile seizures as a child

**A 9-year-old girl is scheduled for a day case tonsillectomy to alleviate symptoms of upper airway obstruction and dysphagia. You are asked to examine the child and obtain informed consent from her parents.**

26. Which of the following is not a contraindication to performing tonsillectomy in this patient?
- a. Presence Bifid uvula or Cleft palate
  - b. Severe thrombocytopenia
  - c. Temperature of 102 F with purulent rhinorrhea and inflamed tonsils
  - d. Dysphagic symptoms
  - e. Wheezing and added breath sounds on auscultation
27. The least likely intra-operative complication to occur is
- a. Temporo-mandibular joint dislocation
  - b. Respiratory distress
  - c. Nasopharyngeal stenosis
  - d. Prolonged bleeding
  - e. Diathermy Burns to the lips and tongue
28. Her parents express concern about the causes and timing of bleeding after tonsillectomy. Which of the following statements is correct?
- a. Intra-operative bleeding is usually arterial in nature
  - b. Primary hemorrhage occurs 48-72 hours post op
  - c. Reactionary hemorrhage occurs 3-5 days post op & is most commonly due to infection
  - d. Delayed hemorrhage is most commonly due to a slipped ligature
  - e. Secondary bleeding occurs most often between 5-10 days post op

## Otolaryngology (ENT) Clerkship Multiple Choice Examination

**29. All of the following surgical instruments are utilized when performing a tonsillectomy EXCEPT**

- a. Boyle-Davis Mouth gag
- b. Dennis Browne forceps
- c. Draffin bipods
- d. Mollisons anterior pillar retractor
- e. Joll's retractor

### **Theme: Nasal Congestion**

**A 34-year-old woman has supra-orbital pain along with post nasal drip and rhinorrhea for 5 weeks. She is noted to have tenderness over the maxilla and a Temperature of 100.4F.**

30. The most likely diagnosis is

- a. Acute rhinosinusitis
- b. Trigeminal Neuralgia
- c. Maxillary Sinus Carcinoma
- d. Chronic rhinosinusitis
- e. Subacute rhinosinusitis

**A 60-year-old man with a long history of smoking and alcohol intake presents with unilateral nasal obstruction, epistaxis, and diplopia. On examination there is fluid behind the left tympanic membrane and a palpable jugulodigastric lymph node.**

31. Which of the following is the most likely to be implicated as a carcinogenic agent in this patient?

- a. Smoking and Alcohol abuse
- b. Human Papilloma Virus
- c. Hardwood dust
- d. Latent membrane Protein 1
- e. Nickle & cadmium exposure

**A 50-year-old man with a history of chronic nasal congestion presents to the outpatient department with blood stained nasal discharge, epiphora and cheek swelling. There is tenderness over the left maxilla and he has decreased range of extra-ocular movements.**

32. The next best step in the management of this patient is

- a. Medial Maxillectomy
- b. X-ray of Sinuses
- c. MRI or CT of the paranasal sinuses
- d. Oral Antibiotics
- e. Intranasal Biopsy

## Otolaryngology (ENT) Clerkship

### Multiple Choice Examination

A 21-year-old female presents to your office with a 2-week history of congestion and thick, green nasal drainage. She has had worsening symptoms over the past 2 days, and her over-the-counter decongestant spray is no longer working. She also noticed that she had a fever of 101.0°F this morning. Her upper teeth have also been “achy.” No nausea, vomiting, or difficulty eating. She has a past medical history of allergic rhinitis, for which she takes loratadine. BP is 99/70; HR is 84; O<sub>2</sub> sat is 98% on room air; temp is 37.5°C. Physical exam reveals translucent tympanic membranes in a neutral position, bilateral maxillary tenderness on palpation. Oral mucous membranes are moist, without signs of swelling or drainage. Nasal turbinates are erythematous and boggy bilaterally. Which of the following is the best treatment option for this patient?

**Theme: Hearing Loss**

A 35-year old woman has noticed difficulty hearing on the telephone since delivering her 3<sup>rd</sup> child. She is concerned because his Mother started having hearing loss at an early age. She enjoys listening to music. Otoscopy shows a pink discoloration behind the left tympanic membrane.

33. Which of the following is most likely to be consistent with her condition?
- a. Noise induced deafness
  - b. Facial nerve palsy
  - c. Type Ad curve on tympanogram
  - d. Improvement in hearing with background noise
  - e. Pulsatile tinnitus
34. A 10-year old is brought to the Otolaryngology clinic by his mother. She complains that he started to watch the television at high volumes and at times he doesn't respond to her. His teacher recommends that he gets his ears tested due to poor school performance. The most likely finding on otoscopy is
- a. Foreign body
  - b. A bluish tympanic membrane with air fluid levels
  - c. Red inflamed tympanic membrane
  - d. Wax impaction
  - e. Flamingo pink tympanic membrane

## Otolaryngology (ENT) Clerkship

### Multiple Choice Examination

An 87-year-old Caucasian man is evaluated in your office for progressive hearing loss. He reports defective hearing on both sides that started more than a year ago and has gradually worsened. The problem is particularly worse when he is in a crowded or noisy environment. He also reports frequent occurrence of roaring sounds and sounds similar to “ringing bells” in his ears. On otoscopic examination, he has mild cerumen impaction in bilateral ears. The Tympanic membranes are intact.

**35.** Which of the following is the most characteristic feature seen with this condition?

- a. High frequency sensorineural hearing loss on audiogram
- b. Noise induced hearing loss
- c. Bilateral Vestibular schwannomas
- d. Meniere disease
- e. Negative Rinne test and weber lateralizing to the affected ear

## Otolaryngology (ENT) Clerkship Multiple Choice Examination

### Theme: dysphagia

36. A 55-year-old woman presents with lethargy, easy fatigability and difficulty swallowing. She has nail spooning, angular cheilitis and pale mucous membranes. A barium swallow is requested and reveals a constriction at the crico-pharynx. The most likely diagnosis is
- Achalasia cardia
  - Dysphagia lusoria
  - Nutcracker oesophagus
  - Plummer Vinson syndrome
  - Oesophageal carcinoma
37. A 72yo man presents with intermittent difficulty in swallowing with regurgitation of stale food materials. Sometimes he wakes up at night with a feeling of suffocation. Choose the single most likely cause of his dysphagia?
- Loss of the myenteric plexus
  - Trypanosomma cruzi infection
  - Benign Oesophageal stricture
  - Oesophageal Carcinoma
  - Defect between thyropharyngeus and cricopharyngeus

**48-year-old woman reports difficulty swallowing for the last year. She has dysphagia to both solids and liquids, and has an associated weight loss of about 20 lb. She has no history of heartburn and takes no medications. Abdominal examination is normal. Chest x-ray shows an air-fluid level in the mediastinum. Barium swallow fluoroscopy reveals a dilated esophagus with pointlike tapering. Manometry reveals incomplete relaxation of the lower esophageal sphincter and no peristalsis in the proximal part of the esophagus.**

38. What is the Most likely diagnosis?
- Benign Oesophageal Stricture
  - Oesophageal adenocarcinoma
  - Primary achalasia
  - Secondary achalasia
  - Pneumomediastinum
39. Which of the following is the most appropriate next step in management?
- Botox injection
  - Endoscopy
  - Pneumatic dilatation
  - Heller myotomy
  - Calcium channel blockers

## Otolaryngology (ENT) Clerkship

### Multiple Choice Examination

#### Theme: Hearing screening

40. A mother brings her 5-day old baby to have a hearing assessment. She is concerned because She has a history of sensorineural hearing loss and did not receive all her vaccinations. The most appropriate test to order is
- a. MRI brain
  - b. Brainstem evoked response
  - c. Tuning fork test
  - d. Pure tone audiometry
  - e. Behavioural audiometry
41. Which of the following modalities of hearing assessment does not require a response from the patient?
- a. Whisper test
  - b. Rinne and Weber tuning fork test
  - c. Pure tone audiogram
  - d. Otoacoustic emission
  - e. Speech testing



## Otolaryngology (ENT) Clerkship Multiple Choice Examination

### Theme: Otorrhea

A 52-year-old male with poorly controlled diabetes has now presented to his general practitioner with gnawing earache. He has a mass in the ear canal along with scant foul smelling mucopurulent discharge from the left ear.

42. Which of the following is likely to be associated with his condition?

- a. Sensorineural hearing loss
- b. Decreased ESR
- c. Fixation of the stapes footplate to the oval window
- d. Infectious spread through the Fissures of Santorini
- e. Attico-antral inclusion epidermoid cyst

A 41-year-old man presents with a longstanding foul smelling ear discharge and progressive hearing loss. Otoscopy shows a perforation of the pars flaccida and a flakey mass in the upper part of the middle ear.

43. The most likely mechanism of the genesis of his condition is

- a. Barotrauma
- b. congenital
- c. Retraction pockets
- d. Squamous metaplasia
- e. Squamous epithelial growth at the edge of a perforation

44. What is the next best step?

- a. Electro-neuronography (E-NeG)
- b. Biopsy
- c. Pure-tone Audiogram
- d. Skull Base MRI
- e. Radical Mastoidectomy

## Otolaryngology (ENT) Clerkship Multiple Choice Examination

### Theme: neck masses in adolescence

**A 14-year old boy is brought to the clinic with swelling to the right side of his neck extending from the angle of the mandible to the upper 1/3 of the sternocleidomastoid muscle. The mass trans illuminates brilliantly**

45. What is the likely diagnosis?
- a. Thyroglossal duct cyst
  - b. Rannula
  - c. Cystic hygroma
  - d. Branchial cleft cyst
  - e. Juvenile angiofibroma

**A 16-year-old Chinese male is referred to your clinic with left sided hearing loss and an ipsilateral 3 cm neck mass. The mass is hard and fixed to underlying structures. Otoscopy shows evidence of serous otitis media in his left ear.**

46. Which of the following is the most closely associated risk factor for his condition?
- a. Human Papilloma Virus
  - b. Cigarette Smoking
  - c. Cantonese style salted fish
  - d. Epstein Barr Virus
  - e. Chinese ethnicity
47. Which of the following investigations would be the next best step in the management of this patient?
- a. Excisional lymph node biopsy
  - b. Incisional lymph node biopsy
  - c. Computed Tomography
  - d. Nasopharyngeal biopsy
  - e. Post nasal space X-ray
48. Appropriate treatment of his hearing loss will likely involve
- a. Myringotomy & Grommet insertion
  - b. Chemoradiation
  - c. Adenoidectomy
  - d. Stapedectomy
  - e. Hearing aid

## Otolaryngology (ENT) Clerkship

### Multiple Choice Examination

**A 16-year-old girl has had a lump in her anterior neck for 6 months. She has a 2-cm solitary left thyroid nodule. Fine-needle aspiration cytology of the mass is consistent with a low-grade papillary malignancy.**

49. Which of the following is the most appropriate next step in management?
- a. Thyroid scan
  - b.  $I^{131}$  therapy
  - c. Total thyroidectomy
  - d. Thyroxine therapy
  - e. Left thyroid lobectomy

Theme: Head & Neck anatomy

**Your consultant has asked you to scrub in and assist in performing a right hemithyroidectomy on a woman with a follicular neoplasm. During the procedure he points to a structure crossing perpendicular to the inferior thyroid artery. This structure provides motor innervation to the only abductor of the vocal folds.**

50. What is the name of the structure in question?
- a. External branch of the superior laryngeal nerve
  - b. Internal branch of the superior laryngeal nerve
  - c. Non-recurrent laryngeal nerve
  - d. Recurrent laryngeal nerve
  - e. Vagus Nerve
51. What muscle does this nerve supply?
- a. Lateral cricoarytenoid
  - b. Thyroarytenoid
  - c. Posterior cricoarytenoid
  - d. Aryepiglottic fold
  - e. Cricothyroid muscle
52. Which of the following statements is true, regarding the anatomical course of this structure?
- a. It loops around the arch of the aorta on the right
  - b. It loops around the brachiocephalic vein on the left
  - c. It loops around the innominate artery on the left
  - d. It loops around the vertebral artery on the left
  - e. It loops around the subclavian artery on the right

## Otolaryngology (ENT) Clerkship Multiple Choice Examination

53. Which of the following is the primary function of the larynx?

- a. Phonation
- b. Effort closure
- c. Airway protection
- d. Respiration
- e. Valsalva

54. An 81-year-old man comes to your office complaining of difficulty hearing from the right ear. He has noticed a gradual decrease in ability to hear from the ear, and a sensation of “muffled” sounds on the right side. Upon inspection, the external auditory canal is non-erythematous and without drainage. There is mild cerumen accumulation, and a dry, scaly accumulation of material along the edge of the tympanic membrane. The membrane itself is non-bulging without evidence of fluid pressure.

Which of the following statements is true regarding his most likely diagnosis?

- a. a low frequency hearing loss is typical of this condition
- b. a biopsy should be taken to rule out a malignant otitis externa
- c. on Rinne testing, bone conduction will be better than air conduction
- d. an urgent CT scan of the temporal bones should be requested to rule out an acoustic neuroma
- e. Ischemia to the Organ of Corti, prolonged noise exposure, and decreased elasticity of the basilar membrane are all possible causes

55. Which of the following statements about nasal polyps is correct?

- a. Can cause anosmia
- b. Have a pinkish appearance
- c. Rarely recur after polypectomy
- d. Rarely respond to steroids topically
- e. Usually originate from the maxillary sinus

## ENT, Head & Neck Surgery Department

### Head & Neck trauma

Choose the single best answer.

Duration: 30 mins

This Paper consist of 30 MCQs and 6 pages.

#### Part I

1. A 17-year-old girl is brought into the emergency department by emergency medical technicians. They report that she was involved in a motor vehicle accident and was unconscious at the scene. Your next immediate step is to
  - a. insert intravenous access to take blood and then bolus fluids
  - b. check her central pulse
  - c. Auscultate her chest
  - d. Check that her airway is patent
  - e. Do a quick neurological examination
2. A 25-year-old male presents to the emergency department with a stab wound to the neck. Which of the following is not considered a “hard sign” indicating that he could have major arterial injury?
  - a. Observed pulsatile bleeding or expanding haematoma
  - b. Absent or decreased radial pulses
  - c. Thrill or vascular bruit heard over sternocleidomastoid
  - d. Oropharyngeal blood
  - e. Evolving hemiparalysis/facial drooping
3. A 15-year-old boy is rushed to the emergency department after receiving a single gunshot wound to the neck. The presence of which of the following, would most influence your decision for immediate surgical intervention?
  - a. Subcutaneous emphysema
  - b. Hypovolemic shock not responding to fluids
  - c. No movement in any of his extremities
  - d. Blood in the oropharynx
  - e. Non-expanding haematoma
4. You are called to the emergency department to see a 30-year-old male who sustained stab wounds to the chest, neck and abdomen by unknown assailants. Although he is talking his breathing is laboured. Vital signs are: BP 130/70, PR 90, RR 28. On closer examination he has a zone 1 injury with no “hard signs”. There is however decreased breath sounds on the left side, and faint heart sounds. His abdomen is soft. Your next step should be
  - a. Endotracheal intubation
  - b. urgent CT Neck angiogram
  - c. Insert a chest tube
  - d. Emergency laparotomy
  - e. FAST ultrasound ± pericardiocentesis
5. What type of facial bone fracture is clinically detected when tugging on the maxilla/hard palate causes the nose to move.
  - a) Zygomaticomaxillary complex fracture (tripod)
  - b) dentoalveolar fracture
  - c) le fort type 3, craniofacial dysjunction
  - d) le fort type 2, pyramidal fracture,
  - e) le fort type 1, horizontal maxillary fracture

## ENT, Head & Neck Surgery Department

6. Which is INCORRECT of facial fractures?
  - a. Diplopia in blow out fractures of orbit are secondary to entrapment of inferior rectus muscle.
  - b. Le Fort 1 fractures are the most common maxillary fractures.
  - c. Naso-ethmoidal orbital injuries commonly cause CSF rhinorrhea.
  - d. The Water's view will show the majority of facial fractures on XRAY.
  - e. Infants are more likely to sustain frontal bone fractures than maxillary fractures.
7. What is the extent of Zone 1 (as described by Roon and Christensen classification of neck trauma)?
  - a) clavicles to cricoid cartilage
  - b) cricoid cartilage to angle of mandible
  - c) angle of mandible to base of skull
  - d) Midline to anterior border of sternomastoid
  - e) Post border of sternomastoid to ant border of trapezius
8. Which statement is incorrect with regards to penetrating neck injuries?
  - a) if the platysma muscle is clearly intact local wound repair is all that is required
  - b) if the platysma has been violated it is wise to assume that significant injury has occurred
  - c) in a stable patient with a zone 1 injury, angiography, oesophagoscopy,  $\pm$  bronchoscopy is recommended
  - d) in a stable patient with a zone 3 injury angiography & oesophagoscopy is mandatory +/- bronchoscopy
  - e) an unstable or symptomatic patient with a Zone 2 injury requires mandatory exploration
9. You are called to see a 30-year-old male with a penetrating injury to the left side of the neck. He is alert but has active bleeding. He is in a resuscitation cubicle of the A&E dept. You would address this bleeding by first:
  - a. Placing 2 large bore IV cannulae and giving O negative blood
  - b. Applying pressure to the site
  - c. Clamping any site of bleeding to obtain stasis
  - d. Locally exploring the wound to locate the bleeding point.
  - e. Irrigating the wound with normal saline to visualize the vessel bleeding
10. A 44-year-old male is admitted after sustaining an injury to the left neck just below the angle of the mandible. O/E: he has ptosis, miosis and anhidrosis. Which of the following structures is most likely to be affected/injured?
  - a. Superior cervical ganglion
  - b. External carotid artery
  - c. Hypoglossal nerve
  - d. Retromandibular vein
  - e. Inferior thyroid artery
11. A 21-year-old male is rushed to a level-one trauma center after sustaining a stab wound to the neck during a gang fight. On physical exam, his vitals are as follows: BP 90/70, HR 110, RR 21, O2 Sat 95%. He is noted to have a 3cm laceration 1 cm inferior to the mastoid process on the right side. After placement of two large bore peripheral IV's, intravenous fluids are started. After 3 L of normal saline and 2 units of blood, his HR is 105 and BP is 100/75. Which of the following is the most appropriate next step in the management of this patient?
  - a. Surgical exploration
  - b. CT Arteriogram
  - c. Neck ultrasound
  - d. Tracheostomy
  - e. Observation

## ENT, Head & Neck Surgery Department

12. A 25-year-old female is brought to the emergency room after what appears to be a self-inflicted slash wound to the neck. On physical exam, her vitals are as follows: BP 82/60, HR 118, RR 23, O2 Sat 96%. She is noted to have a 4.5 cm laceration at the level of the thyroid cartilage on the left side. After receiving full IV access she is started on fluids. After 3 L of saline and 2 units of blood her BP is 90/70. Which of the following is the most appropriate next step in the management of this patient?

- a. Arteriogram
- b. Tracheostomy
- c. Neck CT
- d. Surgical exploration
- e. Observation

13. Which of the following is statements about penetrating neck wounds is FALSE?

- a. All neck injuries including zones 1,2, or 3 that penetrate the platysma should be explored
- b. Stable, symptomatic patients with penetrating neck injuries to zone 3 require angiography prior to neck exploration
- c. Asymptomatic patients with penetrating neck injuries to zone 1 require imaging prior to neck exploration
- d. Penetrating neck injuries to zone 1 may require angiography and or esophagoscopy
- e. All unstable patients with penetrating neck injuries should be taken directly to the operating room

A 24-year-old man is stabbed in the right lower neck. The wound is below the cricoid cartilage, behind and lateral to the sternocleidomastoid muscle and just above the clavicle. His BP is 90/60 and pulse rate is 110. You observe that his trachea is deviated to right. Chest auscultation reveals decreased breath sounds and muffled heart sounds.

14. How would you best describe the location/area of injury?

- a. Level I
- b. Zone II
- c. Level 2
- d. Zone 3
- e. Zone I

15. What is the most likely diagnosis?

- a. Pericardial tamponade
- b. Thoracic duct injury
- c. Subclavian artery injury
- d. Tension pneumothorax
- e. Carotid artery injury

16. What is the next best step?

- a. Order an Urgent Chest X-ray to confirm the diagnosis
- b. Site an IV access and bolus 1 L of fluid
- c. Insert a chest tube in the 5<sup>th</sup> intercostal space
- d. Emergency neck exploration in the operating theatre
- e. Needle thoracostomy in the right 2<sup>nd</sup> intercostal space

## ENT, Head & Neck Surgery Department

A 30-year-old man is stabbed with an ice pick below the level of the cricoid, anterior to the sternocleidomastoid and above the sternal notch. He is currently in stable condition with no signs of respiratory distress, but complains of dysphagia, painful swallowing and one episode of hematemesis. On palpation he has subcutaneous emphysema and tenderness at the site of injury. There are no hard signs of vascular injury. Chest expansion and air entry is equal bilaterally.

17. Which of the following should be avoided?

- a. nasogastric tube placement
- b. Keeping the patient nil by mouth
- c. IV antibiotics
- d. Maintenance IV fluids
- e. Analgesics

18. Which of the following investigations is most likely to accurately confirm perforation of the oesophagus?

- a. Portable chest and neck X-rays
- b. Barium swallow
- c. Coffee grounds after passing a nasogastric tube
- d. Thoracentesis
- e. Contrast-enhanced imaging combined with flexible endoscopy

A 19-year-old girl is brought into the ED with gunshot wounds to the neck and chest. She is unresponsive and bleeding profusely from the left side of the neck at level of the cricoid cartilage. She is gasping for breath and blood is in her oral cavity/oropharynx. Her vital signs on arrival include: BP 100/65, PR 90, RR 36. Pressure is applied to the wound. She has decreased air entry in the left hemithorax.

19. What is the most important next best step?

- a. Attempt Endotracheal intubation
- b. Insert a Chest tube
- c. Transfusion with O negative blood
- d. Suction the airway then intubate
- e. Neurologic examination

A 27-year-old male is brought in to the ED after being found down in front of his apartment. The neighbors report that the patient was a stabbing victim, and a small knife was found on the left neck by EMS and left in place. En route, the patient's blood pressure is 91/53 mmHg, pulse is 110/min, respirations are 21/min, and oxygen saturation is 95% on room air with GCS of 15. On exam, there is a small knife on the lateral left neck above the sternal notch with a large hematoma that feels pulsatile. There is adequate breath sounds and equal air entry bilaterally. There are also multiple stab wounds and lacerations on his back

20. What is the next most appropriate step?

- a. Chest tube insertion
- b. Removal of the knife in casualty department
- c. Computed tomography of the neck
- d. Probe the wound
- e. Bolus crystalloids and request blood immediately



## ENT, Head & Neck Surgery Department

A 32-year-old patient is brought into the accident and emergency department after sustaining severe facial trauma during a motor vehicle collision. He was not wearing a seatbelt. The patient was rescued from his vehicle by EMT & was unconscious at the time. On physical examination he is awake and in visible respiratory distress. He has a “dish face” deformity and bleeding from the nostrils and mouth. His voice sounds “gurgly” and unintelligible despite repeated suctioning. The patient is started on oxygen supplementation. Earlier attempts at awake orotracheal intubation have unsuccessful.

21. What is the next best step?
  - a. Nasotracheal intubation
  - b. Nasogastric tube placement
  - c. Surgical airway
  - d. Anterior Nasal Packing
  - e. Rapid sequence intubation
22. Computed tomography shows, fracture line passes through nasofrontal suture, maxillo-frontal suture, orbital wall, and zygomatic arch / zygomaticofrontal suture. What is the most likely diagnosis?
  - a. Lefort type 1
  - b. Lefort type 2
  - c. Lefort type 3
  - d. Naso-ethmoidal-orbital fracture
  - e. Tripod fracture
23. Which of the following studies is best for the initial evaluation of fractures involving the maxilla, maxillary sinuses, orbital walls and zygomatic arches?
  - a. Axial CT scan of the head
  - b. Coronal CT scan of the head
  - c. Lateral view of the facial bones
  - d. Posterior-anterior view of the facial bones
  - e. Occipitomental (watersview) Radiograph
24. A 17-year-old intoxicated unrestrained front seat passenger was thrown from a convertible when it struck a tree. Respirations are agonal, blood pressure is 140/90. Blood is present in the right ear canal. The maxilla and nasal bones are freely mobile on both sides and bloody rhinorrhea is present. Which of the following would be a treatment priority?
  - a. Immediate orotracheal intubation or surgical airway
  - b. Nasotracheal intubation
  - c. Opening the airway with head tilt and chin lift
  - d. C-spine X-ray
  - e. Tracheostomy in the operating theatre
25. A 27-yr-old woman was an unrestrained driver of a car that was rear ended just before arrival to the emergency department. She complains of a sore nose, epistaxis & nasal congestion. Examination reveals swelling on each side of the nasal septum. What is the most appropriate action?
  - a. Order Clotting studies
  - b. Closed Reduction of the nasal septum in the clinic
  - c. Incision and drainage followed by anterior packing in the OR
  - d. Give an early appointment to be seen in the ENT clinic
  - e. Bilateral turbinectomy

## ENT, Head & Neck Surgery Department

A 29-year-old male comes to A& E with a 2cm stab wound to the left neck. His vital signs are stable, and he displays no signs of respiratory or painful distress. The patient is conversant and denies any symptoms of dysphagia, odynophagia, hoarseness, hematemesis or hemoptysis. Oropharyngeal inspection is unremarkable. Auscultation of his chest and heart sounds are normal. On closer examination, the wound is over the sternocleidomastoid & lateral to the thyroid cartilage. The platysma is breached, the wound appears deep but there is no active bleeding and no underlying hematoma. He has normal carotid pulsations, with no thrills or bruits. His neurological examination is normal and upper limb pulses are palpable and regular.

26. What is the most appropriate action?

- a. Allow home, after suturing the wound
- b. Observe for 24 hours
- c. Mandatory neck exploration, oesophagoscopy & bronchoscopy
- d. CT or neck ultrasound to rule out vascular injury
- e. Pass a nasogastric tube & keep NPO

A 25-year-old male received a single gunshot wound to the neck. The on-duty ENT surgeon is contacted, and decides to take the patient to the operating theatre for neck exploration.

27. Which of the following structures is not contained within the carotid sheath?

- a. common carotid artery
- b. cervical sympathetic trunk
- c. internal jugular vein
- d. internal carotid artery
- e. vagus nerve

28. During the operation profuse bleeding is encountered. The source appears to be from injury to the common carotid artery. An important principle in this operation is to

- a. apply vascular clamps blindly to stop bleeding whenever visibility is poor
- b. ligate the carotid with umbilical ties & it cut once either proximal or distal control has been obtained
- c. gain haemostasis by using diathermy directly on the carotid to coagulate the site of bleeding
- d. never open a bleeding vessel until proximal and distal control has been achieved
- e. inject adrenaline into the bleeding vessel to reduce bleeding by causing vasospasm

29. Regarding temporal bone fractures, which of the following is FALSE?

- a. Beta 2 transferrin is a specific marker used to detect CSF otorrhoea.
- b. There is no increased risk of meningitis even if there is a CSF leak
- c. Facial nerve palsy, vertigo & sensorineural hearing loss is more likely if the otic capsule is violated
- d. A conductive hearing loss may occur if the patient has a haemotympanum, ossicular chain disruption or ruptured tympanic membrane
- e. A temporal bone fracture may be suggested if there is mastoid ecchymoses (battle's sign)

30. A stab wound just above the left clavicle, lateral to the sternocleidomastoid muscle, may be life-threatening because of the possibility of injury to the:

- a. Brachial plexus
- b. Brachiocephalic artery
- c. Axillary artery
- d. Subclavian artery
- e. Thoracic duct

## Otorhinolaryngology (ENT)

### Laryngology

Choose the single best answer.

Duration: 30 mins

This Paper consist of 30 MCQs and 6 pages.

#### Anatomy & Physiology

1. Regarding the anatomy of the larynx and its close relations, which of the following statements is MOST CORRECT?
  - a. Suprahyoid muscles include the thyrohyoid, omohyoid, sternohyoid, and sternothyroid
  - b. The angle between the two laminae of the thyroid cartilage is less acute in men  $>120^{\circ}$
  - c. The union of the two plates of the thyroid cartilage occur more acutely in women than men  $<90^{\circ}$
  - d. The paired laryngeal cartilages include; the thyroid, cricoid, and epiglottis
  - e. The thyrohyoid membrane is pierced laterally by the superior laryngeal nerves and vessels
  
2. Which of the following statements is MOST ACCURATE?
  - a. The larynx is suspended from the hyoid bone by the cricothyroid ligament
  - b. The function of the cricothyroid is to pull the thyroid cartilage inferiorly to lengthen the vocal folds
  - c. The inferior laryngeal nerve supplies all muscles of the larynx except the posterior cricoarytenoid
  - d. The infrahyoid muscles include the stylohyoid, geniohyoid, and digastric muscles
  - e. The intrinsic muscles elevate and depress the larynx
  
3. Which of the following statements is TRUE?
  - a. The purpose of the sacculus is to keep the vocal folds dry by absorbing the mucous they produce
  - b. The superior laryngeal artery is a branch of the first part of the subclavian artery
  - c. The inferior laryngeal artery is a branch of the external carotid artery
  - d. The superior laryngeal vein drains into the internal jugular vein
  - e. The inferior laryngeal vein drains into the external jugular vein
  
4. Which of the following statements is FALSE?
  - a. The posterior cricoarytenoid muscle is supplied by the superior laryngeal nerve
  - b. The recurrent laryngeal nerve supplies sensory to the glottis and subglottis
  - c. The facial nerve innervates muscles that are attached to the hyoid bone
  - d. The larynx is mostly lined by pseudostratified ciliated columnar cells with goblet cells
  - e. The superior laryngeal nerve supplies sensory to the supraglottis
  
5. Regard the anatomy of the trachea, which of the following statements is INCORRECT?
  - a. It lies anterior and to the left of the arch of the aorta
  - b. The cartilaginous rings are deficient posteriorly
  - c. It lies anterior to the oesophagus in the superior mediastinum
  - d. The left mainstem bronchus is narrower, longer and more horizontal than the right
  - e. The right mainstem bronchus is shorter and more continuous with the trachea

## Otorhinolaryngology (ENT)

### Questions 6-10 pertain to the following clinical scenario

A 58-year-old chronic smoker and alcoholic presents to your clinic complaining of odynophagia and dysphagia for 3 months. He also admits weight loss with new onset otalgia and hoarseness over the past 3 weeks.

6. The MOST likely diagnosis is
  - a. Squamous cell carcinoma confined to the glottis
  - b. Early stage carcinoma of the cervical oesophagus
  - c. Carcinoma confined to Subglottic region of the larynx
  - d. Locally advanced Supraglottic squamous cell carcinoma
  - e. Advanced hypopharyngeal mucoepidermoid carcinoma
7. The next best step is;
  - a. Flexible fiberoptic laryngoscopy
  - b. Soft tissue lateral neck x-ray
  - c. Angiography
  - d. Rigid oesophagoscopy
  - e. Barium swallow
8. The patient is asked to obtain further investigations. Which of the following would be the most useful to evaluate the extent of his disease?
  - a. Chest x-ray
  - b. Neck ultrasound
  - c. Indirect laryngoscopy
  - d. Bronchoscopy
  - e. Computed tomography
9. Unfortunately, an unexpected delay in arranging his investigations occurs and he eventually represents to the emergency department with stridor. The A&E officer and anaesthetist are both unable to intubate. Your immediate next step should be
  - a. Perform an emergency "Slash" tracheostomy
  - b. Perform an emergency "low" tracheostomy
  - c. Perform an emergency "high" tracheostomy
  - d. Perform debulking biopsies of the larynx
  - e. Perform an elective tracheostomy

Radiologic imaging and direct visualization shows no extension of the primary lesion into the post cricoid space. However, the lesion is now transglottic and invading the thyroid cartilage. A small (< 2cm) ipsilateral level II cervical lymph node is visible.

10. Which of the following surgical treatment options would be the most appropriate?
  - a. Microlaryngectomy, and lymph node biopsy
  - b. Hemilaryngectomy, and prophylactic neck dissection
  - c. Partial laryngectomy and modified radical neck dissection
  - d. Total laryngectomy ± selective neck dissection
  - e. Total Laryngopharyngectomy, ± radical neck dissection

## Otorhinolaryngology (ENT)

Appropriate surgical resection and reconstruction is uneventful and the patient is scheduled for post-operative radiotherapy in a few weeks.

11. Which of the following postoperative complications is now LEAST likely to occur?
  - a. Pharyngocutaneous fistula
  - b. Hypothyroidism
  - c. Aspiration
  - d. Skin Flap Haematoma
  - e. Stomal stenosis
  
12. A few days after the operation you are called to review the patient because he is in acute respiratory distress. On examination he is confused and combative. What is the next best step?
  - a. Immediate removal of the tracheostomy tube
  - b. Suction the tracheostomy tube with saline
  - c. Q2-4hrly normal saline nebulization
  - d. Order CT pulmonary angiogram
  - e. IV lorazepam stat and PRN limb restraints
  
13. A 37-year-old saxophone player presents to clinic with a painless neck swelling that fluctuates in size and gets worse whenever he performs. The swelling is reducible. The most likely diagnosis is
  - a. Pharyngocele;
  - b. Laryngocele
  - c. Laryngeal mucocele
  - d. Pharyngeal pouch
  - e. Singer's nodule
  
14. A teacher had a respiratory infection for which she was prescribed antibiotics. After the antibiotic course when she rejoined school, she lost her voice completely. What is the single most appropriate diagnosis?
  - a. Functional dysphonia/vocal cords
  - b. Recurrent laryngeal nerve palsy
  - c. Hereditary Angioedema
  - d. Voice abuse
  - e. Acute Laryngitis
  
15. A 36-year-old woman has an injury to the right external laryngeal nerve during thyroid surgery. What symptom would be expected in this patient?
  - a. Dysphonia
  - b. Stridor
  - c. Hoarseness
  - d. Aphonia
  - e. Aphasia

## Otorhinolaryngology (ENT)

16. An infant with stridor is referred to you by the Paediatric service. He was previously being treated for recurrent respiratory tract infections. Review of his docket shows that he was intubated for a few weeks while in the Neonatal Intensive Care Unit. What is the most likely diagnosis?

- a. Laryngomalacia
- b. Subglottic tracheal stenosis
- c. Tracheo-oesophageal fistula
- d. Bilateral true vocal cord palsy
- e. Laryngeal web

### **Questions 17 through 19 relate to the following clinical scenario1**

A 6-year-old boy presents with a history of persistent hoarseness. Despite multiple previous surgical interventions, he fails to improve and eventually requires a tracheostomy. Laryngoscopy shows polypoidal projections on the vocal cords.

17. What is the most likely diagnosis?

- a. Atypical laryngeal squamous cell carcinoma
- b. Juvenile onset recurrent laryngeal candidiasis
- c. Juvenile onset recurrent laryngeal stenosis
- d. Juvenile onset recurrent laryngeal adenomatosis
- e. Juvenile onset recurrent respiratory papillomatosis

18. Treatment options include all the following EXCEPT

- a. Topical Acyclovir
- b. Carbon dioxide laser
- c. Intralesional Cidofovir
- d. Interferon therapy
- e. Cryotherapy

19. The most likely aetiologic agent(s) is

- a. An RNA virus types 6 & 11
- b. A DNA virus type 6 & 11
- c. A DNA Virus type 16 & 18
- d. Human herpes virus type 4
- e. Human Immunodeficiency virus

20. A 48-year old teacher complains that recently her voice sounds low-pitched and raspy. She has also been feeling lethargic and depressed for several months. She takes medications occasionally to treat "heartburn" and admits to smoking cigarettes on weekends. On examination she is obese. Her pulse is 56. Flexible fiberoptic laryngoscopy shows a "sac-like" appearance of both vocal folds with diminished vibrations.

(I) What is the most likely diagnosis? and (II) What is the most appropriate management strategy?

- a. Singers nodule; advise voice rest and time off work
- b. Polypoid corditis; treat her with antibiotics and corticosteroids
- c. Smokers polyps; biopsy both cords and then start her on nicotine patch
- d. Reinkes oedema; order TFT's, advise voice rest, weight loss, smoking cessation, and PPI's
- e. Laryngeal carcinoma; biopsy both vocal cords then suggest radiotherapy or laryngectomy

## Otorhinolaryngology (ENT)

21. A retired businessman is referred to your office because of persistent hoarseness. Indirect laryngoscopy shows a normal appearing left vocal cord however it is fixed in the paramedian position. All the following are possible causes EXCEPT
- a. Pancoast tumour
  - b. Left atrial enlargement
  - c. Vagus nerve schwannoma
  - d. Anaplastic thyroid carcinoma
  - e. Oesophageal Carcinoma

### Questions 22-24 relate to the following clinical scenario

A 3-year-old girl is brought into the A&E department with noisy breathing. She received age appropriate vaccinations months ago. Since this morning the child has been drooling and refuses to eat. O/E: She is febrile at 104°F and has inspiratory stridor & sits in a tripod position.

22. The most likely diagnosis is
- a. Adenoidal hypertrophy
  - b. Supraglottitis
  - c. Laryngo-tracheo-bronchitis
  - d. obstruction in the right mainstem bronchus
  - e. Angioneurotic oedema
23. The most likely cause is
- a. Haemophilus Parainfluenzae
  - b. Foreign body aspiration
  - c. Non-type b haemophilus influenzae
  - d. Streptococcus pyogenes
  - e. Food allergy
24. The next best step is
- a. Contact senior anaesthetist and transfer the patient to the operating theatre
  - b. Order lateral and AP radiographs to check for thumbprint or steeple sign
  - c. Indirect laryngoscopy to check for a swollen erythematous epiglottis
  - d. Immediate fiberoptic nasoendoscopy in the accident and emergency department
  - e. Give Oxygen, steroids, and Q4hrly racemic epinephrine

### Tracheostomy

25. A tracheostomy may be necessary in the following cases EXCEPT....
- a. to protect against aspiration of blood due to comminuted facial bone fractures
  - b. to increase the work of breathing by increasing the anatomic dead space
  - c. to bypass an upper airway obstruction due to a malignancy or infection
  - d. to reduce the risk of tracheal stenosis due to prolonged endotracheal intubation
  - e. to allow suctioning of copious mucous production due to bronchiectasis

## Otorhinolaryngology (ENT)

26. Regarding tracheostomy which of the following steps is correct?
- a. neck should be hyper-flexed to allow stretching of the strap muscles
  - b. pyramidal lobe of the thyroid is cut and removed to expose the trachea
  - c. internal jugular vein is often ligated or to prevent bleeding
  - d. cricoid cartilage should be excised to allow access to the tracheal lumen
  - e. the tracheostomy tube is usually inserted between tracheal rings 2-4
27. Immediate post-operative complications of a tracheostomy include all the following EXCEPT
- a. Pneumothorax
  - b. Tracheal stenosis
  - c. Bleeding
  - d. Subcutaneous emphysema
  - e. Tube dislodgement
28. Which of the following is not a part of the post-operative care required after performing a tracheostomy?
- a. Regular suctioning as needed
  - b. Humidification of inspired air
  - c. Keeping the cuff inflated at all times
  - d. Monitoring of vital signs and oxygen saturation
  - e. adjunctive chest physiotherapy
29. Which of the following statements is FALSE regarding the inflatable cuff on a tracheostomy tubes?
- a. The cuff is inflated to keep the tracheostomy tube in place
  - b. An inflated cuff may reduce the risk of aspiration
  - c. The cuff is inflated to give positive pressure ventilation
  - d. When the cuff is inflated a patient may not be able to vocalize
  - e. The pilot bulb gives an idea of how inflated the cuff might be
30. A patient presents with bleeding from the tracheostomy site and hemoptysis post op. Which of the following is LEAST LIKELY to be the source?
- a. Trachea-innominate fistula
  - b. Anterior jugular vein
  - c. Thyroid ima artery
  - d. Internal thoracic artery
  - e. Injury to the carotid sheath

END OF EXAMINATION



## Otorhinolaryngology (ENT)

### Otology Questions

Duration 30 mins

Choose the single best answer.

This Paper consist of 30 MCQs and 7 pages.

### Anatomy of the Ear & Facial Nerve

1. Which nerve does not supply sensation to the external or middle ear?
  - a. Auriculotemporal branch of the Trigeminal nerve
  - b. Superior branch Vestibulocochlear nerve
  - c. Auricular branch of the Vagus nerve
  - d. Tympanic Branch of the Glossopharyngeal nerve
  - e. Facial Nerve via the nervous intermedius
2. Regarding the external auditory canal (EAC), which of the following statements is TRUE?
  - a. Its total length is approximately 2.4 millimeters
  - b. The outer 1/3 is cartilaginous and inner 2/3 is bony
  - c. It is lined by pseudostratified ciliated columnar epithelium
  - d. The mastoid air cells and sigmoid sinus are both anterior to the EAC
  - e. Its anterior wall of the EAC is longer than its posterior wall
3. Regarding the anatomy of the pharyngotympanic tube, which of the following statements is FALSE?
  - a. Its bony part is approximately 24mm and lined with squamous cells
  - b. Its total length is approximately 36 mm
  - c. The medial 1/3 is cartilaginous and lateral 2/3 is bony
  - d. Opens with swallowing by tensor and levator veli palatini muscles
  - e. Is more horizontal and shorter in children than adults
4. Regarding the anatomy of the facial nerve, which of the following statements is incorrect?
  - a. Enters the temporal bone via the stylomastoid foramen
  - b. Supplies taste sensation to the anterior 1/3 of the tongue
  - c. Supplies secretomotor fibres to the lacrimal gland via its greater petrosal branch
  - d. Innervates the styloglossus and anterior digastric muscles
  - e. Supplies secretomotor fibres to the parotid gland via the otic ganglion
5. Regarding the anatomy of the inner ear
  - a. The "Organ of Corti" is situated on the basilar membrane
  - b. Perilymph is produced and circulated in the Scala media
  - c. Endolymph is rich in sodium ions but lacks potassium ions
  - d. The basilar membrane separates the cochlear duct from the vestibular duct
  - e. Reissner's membrane separates the Scala media from the Scala tympani

## Otorhinolaryngology (ENT)

### Otalgia

*The following clinical scenario pertains to questions 6-8*

A 65-year-old woman presents with severe otalgia that is unrelieved by oral analgesics. On inspection the patient has a facial paresis. Examination of the left ear is exquisitely painful and shows granulation tissue in the external auditory canal but minimal debris.

6. What is the MOST likely diagnosis?
  - a. Malignant Otitis Media
  - b. Diffuse Otitis externa
  - c. Necrotizing Otitis Externa
  - d. Acute suppurative otitis Media
  - e. Chronic suppurative Otitis media
7. What is the most likely organism to be cultured?
  - a. Pseudomonas aeruginosa
  - b. Klebsiella Pneumoniae
  - c. Epstein Barr Virus
  - d. Streptococcus Pneumoniae
  - e. Staphylococcus aureus
8. Management typically involves all the following EXCEPT
  - a. Monitoring the patients ESR
  - b. Glucose control
  - c. Corticosteroids
  - d. IV fluoroquinolone therapy
  - e. Aural toileting

*The following clinical scenario pertains to questions 9 and 10*

A 45-year-old man presents to the clinic with dull aching pain and tinnitus to the right ear. On examination there are small blisters over the auricle and within the external auditory canal. He has difficulty closing the right eye and keeping food in his mouth while chewing.

9. Treatment of choice in his condition is
  - a. Mastoidectomy
  - b. Botulinum toxin injections
  - c. acyclovir & steroids
  - d. antibiotics directed against Pseudomonas
  - e. surgical resection of the geniculate ganglion

## Otorhinolaryngology (ENT)

10. Pathophysiology of this condition involves
- a. Destruction of CD4 T-helper cells
  - b. Reactivation of varicella zoster in the trigeminal ganglion
  - c. Latent infection with Epstein bar virus
  - d. Reactivation of herpes zoster in the geniculate ganglion
  - e. Latent infection with human papilloma virus

### Tinnitus

*The following clinical scenario pertains to questions 11-13*

A 55-year-old woman presents with unilateral conductive hearing loss and pulsatile tinnitus in the right ear. Otoscopy reveals a reddish blue appearance to the tympanic membrane.

11. The most likely diagnosis is...
- a. An Acoustic Neuroma
  - b. Squamous cell carcinoma
  - c. Otospongiosis
  - d. A Hypotympanic Paraganglioma
  - e. Haemotympanum
12. Which of the following is NOT typically associated with this condition?
- a. "Schwartz" sign
  - b. "Rising sun" sign
  - c. "Phelps" sign
  - d. "Brown" sign
  - e. "Vernet" Syndrome
13. Managing her condition may involve any the following EXCEPT?
- a. Stereotactic radiotherapy
  - b. Surgical excision
  - c. embolization
  - d. Observation
  - e. Immunotherapy

*The following clinical scenario pertains to questions 14 and 15*

A 70-year-old patient complains of mild buzzing sound in both ears which is most noticeable at night. He also longstanding hearing impairment. You suspect he may have Presbycusis.

14. A pure-tone audiogram will likely show
- a. Bilateral sensorineural hearing loss in high frequencies
  - b. Bilateral sensorineural hearing loss in low frequencies
  - c. Unilateral sensorineural hearing loss in low frequencies
  - d. Bilateral conductive hearing loss in high frequencies
  - e. Unilateral conductive loss in low frequencies

## Otorhinolaryngology (ENT)

15. The next best step in managing this patient involves

- a. Stapedectomy
- b. Mastoidectomy
- c. Cochlear nerve repair
- d. Hearing aid
- e. Corticosteroids

### **Otorrhea**

*The following clinical scenario involves questions 16 and 17*

A 40-year-old man presents with a history of unilateral offensive ear discharge for 6 months with squamous debris in the epitympanum that is not self-cleaning. A perforation is seen in the pars flaccida.

16. What is the most likely diagnosis?

- a. Squamous cell carcinoma
- b. Chronic otitis media Atticoantral type
- c. Chronic otitis media tubotympanic type
- d. Foreign body (e.g. cotton bud) in the ear
- e. Malignant otitis externa

17. The next best step in managing this patient is

- a. Radiotherapy
- b. Topical antimicrobial therapy
- c. Tympanomastoid surgery
- d. Audiometry & Temporal Bone CT
- e. Syringing of the ear canal

### **Hearing Loss**

*You are the only Senior House Officer assigned to a busy ENT clinic. The consultant has asked you to take a history, examine and conduct tuning fork testing on two of the following patients.*

Questions 18-20 pertain to the first patient:

(1<sup>st</sup> Patient) A 14-year-old male complaining of right sided deafness. There is fluid behind his right tympanic membrane. Weber test localizes to the right side. Rinne testing is negative on the right and positive on the left. On neck examination a painless 2cm lymph node is palpable.

18. Rinne tuning fork being negative means that:

- a. Air conduction and bone conduction are reduced equally
- b. Air conduction is better than bone conduction on the right side
- c. Bone conduction is better than air conduction on the right side
- d. Sound was lateralized to the unaffected ear
- e. Sound was lateralized to the affected ear

## Otorhinolaryngology (ENT)

19. The most appropriate next step in the management of the patient above would be to

- a. Perform an excisional lymph node biopsy
- b. Commence urgent Radiotherapy
- c. Urgent Nasopharyngectomy
- d. Order Post Nasal space x-ray
- e. Visualize and biopsy the Fossa of Rosenmuller

20. Correcting this patient's hearing loss would most likely involve

- a. Cochlear Implant
- b. Grommet insertion
- c. Brainstem implant
- d. Chemoradiotherapy
- e. Tympanoplasty

Questions 21 - 23 relate to the second patient:

(2<sup>nd</sup> Patient) A 32-yr-old woman who complains of sudden onset unilateral hearing loss, tinnitus, impaired balance and facial numbness. On Weber testing sound localizes to the right side. Rinne testing is positive on both the left and right side.

21. The 2<sup>nd</sup> patient therefore has:

- a. bilateral conductive hearing loss
- b. a left conductive hearing loss
- c. a left sensorineural hearing loss
- d. a right conductive hearing loss
- e. a Right sensorineural hearing loss

22. She should most likely be investigated urgently for

- a. Meniere's disease (idiopathic endolymphatic hydrops)
- b. Ankylosis of the stapes footplate and round window of the cochlea
- c. Otoliths in the horizontal semicircular canal (BPPV)
- d. A Glomus tumour at the jugular foramen affecting cranial nerves 9,10 & 11
- e. A peripheral nerve sheath tumour involving cranial nerve VIII

23. Investigation of choice is

- a. MRI (with gadolinium)
- b. Contrast enhanced CT
- c. Auditory Brainstem response
- d. Evoked Potential
- e. Electroneuronography

## Otorhinolaryngology (ENT)

*The following clinical scenario involves questions 24-26*

A 30-year-old female complained of bilateral hearing loss more on the right side following the delivery of her first child; hearing loss was marked in quiet places but hearing improved in a noisy environment. Both tympanic membranes showed a normal appearance. Rinne tuning fork test was negative.

24. Her condition is most likely due to

- a. Fixation of the Inco-Malleolar joint
- b. Fixation of the footplate of the stapes to the Round window
- c. Fixation of the footplate of the stapes to the oval window
- d. Fixation of the Inco-stapedial joint
- e. Denervation of the nerve supplying the stapedius muscle

25. Which of the following is least likely to be associated with her likely diagnosis?

- a. Type C curve on tympanogram
- b. Carhart's notch on audiogram
- c. "Flamingo-pink" sign on otoscopy
- d. Autosomal dominant inheritance
- e. "Paracusis willisi"

26. Appropriate surgical intervention (stapedotomy) is performed however the patient develops tinnitus, ear fullness, vertigo and fluctuating hearing loss. Which complication has most likely occurred?

- a. Meniere's disease
- b. psycho somatic symptoms
- c. Labyrinthitis
- d. Perilymph fistula
- e. Superior Semicircular canal dehiscence

### **Pediatric Otolaryngology**

27. A 4-year-old presents with ear pulling, irritability and pyrexia. Otoscopy shows a red bulging left tympanic membrane. The next best step in the management of this patient is

- a. Oral amoxicillin
- b. Oral amoxicillin with clavulanate
- c. Topical antibiotic ear drops
- d. Intravenous amoxicillin
- e. Nasal decongestant sprays

28. Which of the following congenital hearing loss syndromes is correctly paired?

- a. Pendred syndrome---retinitis Pigmentosa
- b. Treacher Collins syndrome----micrognathia
- c. Waardenburg syndrome --- glomerulonephritis
- d. Usher syndrome ---- white forelock
- e. Alport syndrome ---- Multinodular goiter

## Otorhinolaryngology (ENT)

### Vertigo

*The following clinical scenario is associated with questions 29 and 30.*

A 35-year-old woman has been complaining over the last 10 years of attacks of incapacitating vertigo, tinnitus and decreased hearing. During the attack there was a sense of aural fullness, the patient described it as if his ear is about to explode. In between the attacks that usually occur once or twice a week the patient feels fine or may have a minor sense of imbalance. The patient also reported that her hearing ability has decreased over the years. Examination of the ears showed bilateral normal tympanic membranes and some non-occluding earwax

29. What is the most likely diagnosis?

- a. Benign Paroxysmal Positional vertigo
- b. Idiopathic Endolymphatic hydrops
- c. Acoustic neuroma
- d. Vertebrobasilar insufficiency
- e. Viral Labyrinthitis

30. Which of the following statements is MOST CORRECT regarding her diagnosis?

- a. Patient will get relief if the Epley manoeuvre is performed
- b. Vertigo never typically last more than just a few seconds
- c. Increasing salt intake should improve her vertigo
- d. A positive Dix-hall Pike Test confirms the disease
- e. Low frequency hearing loss is usually seen on audiometry

**END OF EXAM**

**Rhinology**

Choose the single best answer.

Duration: 30 mins

This Paper consist of 30 MCQs and 6 pages.

**Part I**

Anatomy & Physiology

1. Which of the following statements is true?
  - a. The nasal cavity is supplied by branches of the common carotid & vertebral arteries
  - b. The anterior ethmoidal artery is a branch of the internal maxillary artery
  - c. The sphenopalatine artery is a branch of the ophthalmic artery
  - d. The posterior ethmoidal artery supplies blood to the nasal septum
  - e. The greater palatine artery exits the incisive canal to supply the nasal cavity
2. Which of the following is not a function of the human nose?
  - a. Oxygenation
  - b. Olfaction
  - c. Assist in temperature regulation
  - d. humidification of inspired air
  - e. facilitating non-specific Immunity
3. Which of the following nerves do not supply the nasal septum?
  - a. Olfactory nerves
  - b. Nasopalatine branch of the maxillary nerve
  - c. Anterior ethmoidal branch. of the nasociliary nerve
  - d. Posterior ethmoidal branch. of the nasociliary nerve
  - e. Medial posterior superior nasal branches of the pterygopalatine ganglion
4. Which of the following statements is CORRECT?
  - a. the posterior ethmoidal sinus drains into the superior meatus
  - b. The nasolacrimal duct drains into the middle meatus
  - c. the sphenoid sinus drains into the posterior part of the semilunar hiatus
  - d. the maxillary sinus drains into the most anterior part of the hiatus semilunaris
  - e. the nasofrontal duct opens into the inferior meatus
5. Regarding the Pterygopalatine ganglion, which of the following statements is FALSE?
  - a. It is a parasympathetic ganglion
  - b. It is suspended from the maxillary nerve in the pterygopalatine fossa
  - c. Provides post ganglionic fibres to the mucosal glands of the nose and hard palate
  - d. It receives preganglionic parasympathetic fibres from the glossopharyngeal nerve
  - e. Receives preganglionic parasympathetic fibres from the greater petrosal branch of CN 7



Questions 6 -9 relate to the clinical scenario below

A 65-year old Chinese man presents with a two-month history of a neck swelling in the right posterior triangle. On further questioning he tells you that his hearing has also declined in the right ear. He also has a blocked nose. You highly suspect metastases from a malignancy in the head and neck

6. The most likely location of the primary tumour is in the;
  - a. pharyngeal recess
  - b. Supratubal recess
  - c. piriform recess
  - d. tonsillar recess
  - e. Passavant's Ridge
7. Which of the following carcinogenic agents is MOST strongly associated with the pathogenesis of this malignancy?
  - a. Acrylonitrile from cigarettes
  - b. HPV-E6 & E7 oncoproteins
  - c. EBV-Latent membrane protein 1
  - d. Cantonese style salted fish
  - e. Radiation exposure
8. Treatment of this patient is most likely to involve
  - a. Nasopharyngectomy
  - b. Chemotherapy only
  - c. Cryosurgery
  - d. Neck dissection
  - e. Chemoradiotherapy
9. Otoscopy shows a unilateral serous otitis media and impedance tympanometry is requested. This will likely to show a;
  - a. type A curve
  - b. type B curve
  - c. type C curve
  - d. type Ad curve
  - e. type E curve

Questions 10-13 relate to the following clinical scenario

A 14-year-old boy is referred to the clinic with unilateral nasal obstruction, and recurrent massive epistaxis. Examination shows a smooth vascular submucosal mass arising from the posterior nasal cavity and gross deformity of the left cheek.

10. Which of the following investigations should be avoided in this patient?
  - a. Complete blood count and clotting studies
  - b. Angiography
  - c. Incisional biopsy
  - d. Magnetic resonance imaging
  - e. Fibre optic nasal endoscopy

## ENT, Head & Neck Surgery Department

A contrast enhanced CT scan is requested and the results show a “dumbbell shaped” mass with bowing of the posterior wall of the maxillary sinus (Antral sign) and erosion of the medial pterygoid plate

11. The most likely diagnosis is:

- a. Antrochoanal polyp
- b. Inverted (Schneiderian) papilloma
- c. Esthesioneuroblastoma
- d. Nasopharyngeal Lymphoepithelioma
- e. Juvenile nasopharyngeal angiofibroma

12. The method of choice for the treatment of his condition is

- a. Irradiation
- b. chemotherapy
- c. Surgical resection
- d. Hormonal therapy
- e. Angiography & embolization

13. Rarely this tumour has been known to undergo malignant transformation (especially when treated with radiotherapy) into

- a. Malignant fibrosarcoma
- b. Nasopharyngeal carcinoma
- c. Squamous cell carcinoma
- d. Mucoepidermoid carcinoma
- e. Carcinoma Ex pleomorphic adenoma

### Questions 14-17 pertain to the following clinical scenario

A 25-year- old male is rushed to the emergency department with spontaneous, right sided, epistaxis. The patient is asked to sit up straight, lean forwards and immediately start anterior nasal compression. Although his vital signs are stable an intravenous access is sited and blood samples are taken for appropriate testing. His nasal cavity is then suctioned, and sprayed with a topical vasoconstrictor and a local anaesthetic. Anterior rhinoscopy identifies bleeding from a discrete area on the right anterior inferior portion of the nasal septum.

14. Branches of which of the following vessels do NOT supply blood to the arterial plexus in this area?

- a. Facial artery
- b. Ophthalmic artery
- c. Internal maxillary artery
- d. Superior alveolar artery
- e. Posterior ethmoidal artery

Despite direct pressure, bleeding continues from this small area. However, his vital signs remain stable and he is awake, alert and conversant. Platelet count & clotting studies are within normal limits.

15. The next best step in the management of this patient is?

- a. Anterior nasal packing with gauze strips
- b. Posterior nasal packing with a foley catheter
- c. 75% Silver nitrate application to the bleeding point
- d. Ice pack application to the glabella
- e. Insertion of a nasal tampon (e.g. merocel)

## ENT, Head & Neck Surgery Department

Despite taking all the appropriate measures above, bleeding continues. You decide to take the patient to the operating theatre for examination under anaesthesia and vascular intervention. The most appropriate initial decision is

- a. External carotid artery ligation
- b. Internal carotid artery ligation
- c. Internal maxillary artery ligation
- d. Sphenopalatine artery ligation
- e. Anterior ethmoidal artery ligation

### Questions 16 and 17 relate to the following clinical scenario

A 21-year-old medical student presents to your clinic complaining of nasal congestion, itchy eyes, rhinorrhea and sneezing. These symptoms have been going on since her early teens and occur at specific times of the year (closer to exams). She is a known asthmatic maintained on Ventolin inhaler and has a family history of atopic dermatitis. Her examination shows boggy nasal turbinates with clear, thin secretions. Blood investigations demonstrate elevated serum IgE & a nasal smear shows eosinophilia.

16. The most likely diagnosis is

- a. Acute rhinosinusitis
- b. Allergic rhinosinusitis
- c. Rhinitis medicamentosa
- d. Vasomotor rhinitis
- e. Occupational rhinitis

17. What type of hypersensitivity reaction is usually associated with this condition?

- a. Type I- immediate
- b. Type II-cytotoxic antibody dependent
- c. Type III-immune complex
- d. Type IV-delayed type
- e. Type V- autoimmune receptor mediated

18. The mainstay of treatment of this patient is

- a. Second generation oral antihistamines
- b. Intranasal corticosteroids
- c. Avoidance of possible allergens
- d. Nasal decongestant sprays
- e. Leukotriene modifiers

### Questions 19- 23 pertain to the following clinical scenario

A 54-year-old leather shoe maker develops progressively increasing unilateral nasal obstruction with a blood stained nasal discharge that started 6 months ago. She has swelling involving the left cheek, congested turbinates and loose upper teeth on examination.

19. The MOST likely diagnosis is

- a. Chronic rhinosinusitis due to dental sepsis
- b. Osteosarcoma of the maxilla
- c. Allergic Fungal rhinosinusitis of the maxillary sinus
- d. Pott's Puffy tumour of frontal sinus
- e. Squamous Carcinoma of Highmore's antrum

ENT, Head & Neck Surgery Department

20. Which of the following is the most established risk factor associated with the development of this condition?
- Hardwood dust
  - Betel nut chewing
  - Rum drinking
  - Marijuana smoking
  - Aspergillus Species
21. Which of the following is the best way to evaluate the extent of his disorder?
- Anterior rhinoscopy
  - Indirect laryngoscopy
  - Computed tomography
  - Neck exploration
  - Angiography
22. The patient is deemed a suitable candidate for a partial maxillectomy. Which of the following is a complication associated with this procedure?
- Anhidrosis
  - decreased tearing
  - Bleeding from inferior alveolar artery
  - Sudden Sensorineural hearing loss
  - Enophthalmos
23. In the post-operative period the patient complains of a persistent unilateral clear nasal discharge. You suspect a possible CSF leak. The most accurate test to confirm this is
- Positive Halo sign
  - Beta-2 transferrin
  - Beta-2 microglobulin
  - Evoked brainstem response
  - Computed Tomography
24. A 7-year-old girl presents with nasal discharge, nasal congestion, and cough for 13 days. She is active but febrile at 37.5°C. On examination she has bilateral nasal congestion with yellow, purulent mucous and inflamed turbinates. Her oropharynx has post nasal drainage. She also has facial tenderness on palpation. What is the most likely diagnosis and the next best step her management?
- Acute viral Rhinosinusitis; treat symptomatically and observe
  - Acute bacterial Rhinosinusitis; take an intranasal swab for culture & sensitivity
  - Acute bacterial Rhinosinusitis; treat empirically with amoxicillin/clavulanate
  - Subacute Bacterial Rhinosinusitis; Request Computed Tomography
  - Chronic bacterial Rhinosinusitis; Needle aspiration
25. Regarding surgical procedures of the nose & paranasal sinuses, which of the following statements is MOST CORRECT
- The maxillary sinus ostium is most frequently entered by neurosurgeons to gain access to the pituitary fossa
  - The nasolacrimal duct is commonly entered to drain collections of the maxillary, frontal and ethmoidal sinuses
  - The frontal sinus is the most common paranasal sinus to require surgical excision of a mucocele
  - The uncinate process cannot be visualized during Functional endoscopy Sinus Surgery
  - The sphenoid sinus is frequently entered to gain access to the internal maxillary artery and halt epistaxis

ENT, Head & Neck Surgery Department

26. Select the MOST ACCURATELY matched syndrome listed below;
- Cavernous Sinus syndrome---- asthma, fever, eosinophilia, ethmoidal polyps, vasculitis and granuloma.
  - "Kartegener" syndrome---- anosmia, congenital hypogonadism
  - "Churg-Strauss" syndrome ---- Ophthalmoplegia, chemosis, proptosis, horner's syndrome, CN V sensory loss
  - "Kallman's" syndrome --- Bronchiectasis, situs invertus, ciliary dyskinesia, sinusitis
  - "Osler-Weber-Rendu" syndrome ----autosomal dominant disorder, recurrent epistaxis, telangiectasias
27. Select the infectious/ inflammatory disorder that is LEAST LIKELY to be matched with its commonly isolated/ causative micro-organism(s)
- Acute bacterial maxillary sinusitis.....Strep Pneumoniae, H. Influenzae, M Catarrhalis
  - Toxic shock syndrome .....Pseudomonas Aeruginosa
  - Chronic Rhinosinusitis;.....Prevotella sp., Anaerobic strep., & Fusobacterium
  - Non-Invasive Fungal sinusitis..... Aspergillus fumigatus
  - Mucormycosis (Zygomycosis) .....Rhizopus sp., Mucor sp.
28. Regarding neoplasms of the nasal cavity & paranasal sinuses, which of the following statements is FALSE?
- Squamous cell carcinoma is more likely in persons who have worked in the Nickel/ Cadmium industry
  - Hardwood & leather dust is most frequently associated with ethmoid sinus adenocarcinoma
  - The Sphenoid sinus is most commonly affected by tumours followed by frontal, ethmoid and maxillary sinuses
  - Radiotherapy should be avoided in Fibro-osseous dysplasia because of the risk of malignant transformation
  - Malignancies of the paranasal sinuses usually present with non-specific symptoms and thus present late
29. Regarding the management of nasal trauma which of the following statements is TRUE?
- CSF rhinorrhea usually indicates an isolated fracture to the floor of the nasal cavity
  - Displaced nasal bone fractures should only be reduced within 8 weeks after external swelling has decreased
  - Septal perforation is most commonly caused by infectious (e.g. TB, syphilis) or chronic granulomatous diseases
  - Nasal bone fractures should always be reduced immediately to prevent permanent deformity
  - Septal hematoma is a surgical emergency which requires immediate drainage to prevent saddle nose deformity
30. A toddler is referred to the ENT clinic with a unilateral foul-smelling nasal discharge. Her father states that her symptoms started a few days after he saw her playing with her mother's jewelry box. He also states that her GP had been treating her for several days but her symptoms have not improved with medication. On examination the left nostril is congested and filled with mucous preventing adequate visualization. The next best step to take is
- Order AP and lateral skull x-rays
  - Book the patient for nasal examination under anaesthesia
  - Change her antibiotics and then review her in a few days
  - Syringe the nasal passages with warm normal saline
  - Suction the nostrils then re-examine the patient in a few days

END OF EXAM

# Otorhinolaryngology (ENT)

## Mouth & Oropharynx

Choose the single best answer.

Duration: 30 mins

This Paper consist of 30 MCQs and 6 pages.

### Anatomy & Physiology

1. Regarding the Adenoids and Palatine tonsils, which of the following is TRUE?
  - a. The chief blood supply to the palatine tonsils is via the dorsal lingual artery
  - b. The palatine tonsils lie between the palatoglossus and hyoglossus muscles
  - c. The "adenoids" (nasopharyngeal tonsils) are paired lymphatic structures
  - d. Both the adenoids and tonsils are part of Waldeyers ring
  - e. The adenoids are situated on the inferior-lateral wall of the nasopharynx
2. Regarding the anatomy of the tongue which of the following statements is correct?
  - a. The hypoglossal nerve supplies motor innervation all the muscles of the tongue except the styloglossus muscle
  - b. The glossopharyngeal nerve supplies taste sensation and general sensation to the posterior 2/3 of the tongue
  - c. Lymphatic drainage of the apex of the tongue is via the submental lymph nodes
  - d. The chorda tympani branch of the facial nerve supplies taste sensation to the anterior 1/3 of the tongue only
  - e. contraction of styloglossus results in protrusion of the tongue
3. Regarding the anatomy of the Oral cavity which of the following statements is FALSE?
  - a. The parotid duct opens in the vestibule at the level of the 2<sup>nd</sup> upper molar tooth
  - b. The lingual nerve double crosses the submandibular duct
  - c. The trigeminal nerve supplies general sensation to the oral cavity
  - d. The nasopalatine nerve enters the nasal cavity via the incisive foramen
  - e. The hard palate consists of the palatine process of the maxilla and horizontal process of the palatine bone
4. A patient with a tooth ache may also get referred pain to the ear via the
  - a. Marginal mandibular branch of the Facial nerve
  - b. Auricular branch of the Vagus nerve
  - c. Mandibular branch of the Trigeminal nerve
  - d. Tympanic branch of the Glossopharyngeal nerve
  - e. Occipital nerve

## Otorhinolaryngology (ENT)

5. Regarding the anatomy and physiology of the soft palate which of the following is CORRECT?
- a. The vagus nerve supplies all its muscles except the tensor veli palatini
  - b. The soft palate depresses during swallowing
  - c. The uvula separates the oral cavity proper from the oropharynx
  - d. Its nasopharyngeal surface is lined by stratified squamous epithelium
  - e. The soft palate plays no role in speech production

*The following clinical scenario pertains to questions 6 – 9*

A 5-year-old boy is brought to the clinic by his parents who complain that the child has been snoring excessively for months. They are also concerned that he may have decreased hearing and increased daytime sleepiness.

6. Which of the following additional clinical features would NOT be an absolute indication for adenotonsillectomy?
- a. Unilateral tonsillar enlargement with suspicion of a lymphoma
  - b. Cervical lymphadenitis not responding to antibiotic treatment
  - c. Obstructive airway disease with cor pulmonale
  - d. Recurrent febrile convulsions with documented attacks of tonsillitis
  - e. Spontaneous tonsillar haemorrhage not responsive to antibiotics
7. The patient is scheduled for tonsillectomy. However, on the day of surgery, he had a runny nose, temperature 37.5°C and dry cough. Which of the following should be the most appropriate decision for surgery?
- a. Surgery should be cancelled indefinitely.
  - b. Proceed with surgery if chest is clear and there is no history of asthma
  - c. Proceed with surgery but give intra-operative steroids and antibiotics
  - d. Order a chest x-ray and ask pediatric medicine to review before proceeding with surgery
  - e. Postpone surgery for 3 weeks and start appropriate medical therapy
8. An adenotonsillectomy is eventually performed however 2 hours after the procedure the recovery room nurse calls you to review the patient because of excessive swallowing, hypotension and tachycardia. The patient appears pale.

What is the next best step in the management of this patient?

- a. Apply an adrenaline soaked gauze to the bleeding area
- b. Commence intravenous fluids and observe Q4-6 hrly
- c. Serial CBCs to monitor the hemoglobin levels
- d. Inject the tonsil bed with adrenaline solution
- e. Transfuse and examine patient under general anaesthesia

## Otorhinolaryngology (ENT)

9. 6 days post-surgery he is taken to the emergency room because he spat up blood. This is most likely due to
- Primary haemorrhaging because of a dislodged clot in the tonsil bed
  - Reactionary haemorrhaging due to weaning effects of the anaesthesia
  - Secondary haemorrhaging associated with an upper respiratory tract infection
  - Haematemesis due to gastritis resulting from intraoperative steroids
  - Slippage of ligatures used to tie the inferior pole

Questions 10 and 11 pertain to the following clinical scenario

An elderly man presents to the ENT clinic complaining of "sore throat," "ear ache" and weight loss for 2 months. Neck palpation shows a 2cm x 2cm submandibular lymph node.

10. On oral examination of this patient you would most likely expect to see a lesion located in the

- Nasopharynx
- Lower Lip
- Subglottis
- Hard palate
- Tongue base

11. What would be the next step in diagnosis?

- CT/MRI scan of the head and neck
- Examination under anaesthesia
- open biopsy of the lymph node
- Fine needle aspiration cytology
- Selective Neck dissection

12. Histopathologic examination of the lesion is most likely to show

- Squamous cell carcinoma
- Adenoid cystic carcinoma
- Mucoepidermoid carcinoma
- Adenosquamous carcinoma
- Necrotizing sialometaplasia

13. The most likely risk factor associated with his diagnosis is

- Epstein Barr Virus
- Hardwood dust exposure
- Salted fish consumption
- Cigarette Smoking
- alcoholism



## Otorhinolaryngology (ENT)

### Questions 14. and 15. pertain to the following clinical scenario

A 23-year-old university student comes to Accident and emergency department with a complaint of severe odynophagia, fever and left sided ear ache for a week. His voice is muffled and his uvula is deviated to the right.

14. The most likely diagnosis is

- a. Infectious mononucleosis
- b. Peritonsillar abscess
- c. Peritonsillar carcinoma
- d. Acute pharyngotonsillitis
- e. Retropharyngeal abscess

15. The next most appropriate treatment option is

- a. Transcervical incision and biopsy
- b. Hydration and Analgesics only
- c. Urgent tonsillectomy
- d. Intraoral incision and drainage
- e. Uvulopalatopharyngoplasty

### **Questions 16-18 relate to the following clinical scenario**

A 50-yr-old male is referred to ENT- OPD by his dentist who noted a swelling underneath the tongue. Bimanual palpation shows a solid 1cm x 3cm floor of mouth mass. He has no cervical lymph nodes and denies any pain in relation to meals.

16. The most likely diagnosis is

- a. Sialorrhea
- b. Sialocoele
- c. Sialadenitis
- d. Sialolithiasis
- e. Sialoblastoma

17. The LEAST appropriate investigation to request would be a(n)

- a. Plain open mouth x-ray
- b. Ultrasonography
- c. Sialography
- d. Computed tomographic scan
- e. Incisional submandibular gland biopsy

18. The ideal therapeutic option is

- a. Antibiotics and analgesics
- b. Observation
- c. Submandibular gland excision
- d. Sialoendoscopy
- e. Sialodochoplasty

## Otorhinolaryngology (ENT)

### Questions 19-21 relate to the following clinical scenario

A 65-yr-old woman presents to the clinic with a painless mass to the right side of the hard palate. The mass is soft and bleeds whenever touched. She has no lymphadenopathy

19. Which of the following is the LEAST likely histology if you suspect a neoplasm involving the minor salivary glands on the hard palate?
- a. Papillary cystadenoma lymphomatosum
  - b. Mucoepidermoid carcinoma
  - c. Adenoid cystic carcinoma
  - d. Squamous cell carcinoma
  - e. Low grade Adenocarcinoma
20. Investigations confirm that the lesion is actually oral metastases from an invasive malignancy of the adjacent maxillary sinus. The treatment of choice is
- a. Wide local excision
  - b. Chemo-radiotherapy
  - c. Maxillary antrostomy
  - d. Medial Maxillectomy followed by radiotherapy
  - e. Radiotherapy followed by surgery
21. If excision is considered the most appropriate surgical skin incision is a
- a. Modified Blair incision
  - b. Modified Weber Ferguson incision
  - c. Killian's incision
  - d. Moure's incision
  - e. Rethi-Goodman incision

### The following clinical scenario relates to questions 22 and 23

A 30-year-old woman with a history diabetes mellitus and dental caries presents with a painful swelling under the chin. She was prescribed antibiotics by her General practitioner but did not take them consistently and subsequently developed difficulty swallowing and trismus. Later she becomes febrile and hypoxic.

22. The most likely diagnosis is
- a. Retropharyngeal abscess
  - b. Submandibular abscess
  - c. Ludwig's angina
  - d. Vincent's angina
  - e. Angioedema

## Otorhinolaryngology (ENT)

23. The next best step is
- Nasotracheal intubation
  - Orotracheal intubation
  - Tracheostomy
  - Incision and drainage
  - Urgent CT scan of the Neck
24. A 42-yr-old woman complains of dysphagia and dysphonia. A mass is seen at the base of the tongue. On transoral fine needle biopsy "follicular cells with colloid" is seen. The next best step is
- Emergency resection
  - Observation
  - L-thyroxine
  - Radioiodine therapy
  - Contrast assisted imaging
25. A 50-year-old woman complains of sudden severe shooting lip and cheek pain with light touch and cold drinks. Most appropriate pharmacotherapy is?
- Ibuprofen
  - Carbamazepine
  - Phenytoin
  - Pregabalin
  - Lamotrigine
26. A 30-year-old pregnant woman presents to the ENT clinic with lesion growing in between her teeth and gums. It regularly bleeds and started just shortly after she got pregnant. What is the most likely diagnosis?
- Capillary haemangioma
  - Leukoplakia
  - Odontogenic cyst
  - Ameloblastoma
  - Mandibular torus
27. Complications of tonsillectomy include all the following except
- Glossopharyngeal neuralgia
  - Grisel syndrome
  - Mandibular dislocation
  - Velo-palatal insufficiency
  - Immunodeficiency

## Otorhinolaryngology (ENT)

28. Intra-operative haemorrhaging during tonsillectomy is usually due to bleeding from
- a. Tonsillar branch of the facial artery
  - b. Ascending palatine artery
  - c. Paratonsillar vein
  - d. Palatine branch of the facial artery
  - e. Dorsal branch of the lingual artery
29. Which of the following is an indication for adenoidectomy?
- a. Hyponasal speech
  - b. Velopharyngeal insufficiency
  - c. Recurrent epistaxis
  - d. Cleft palate
  - e. Obstructive sleep apnoea
30. A 19-yr-old university student comes to AE with severe abdominal pain and hypotension. He was playing rugby when his symptoms started. 3 weeks ago, he was treated for exudative tonsillitis. His presentation is most likely due to
- a. Yersinia enterocolitica
  - b. Epstein barr virus
  - c. Treponema Pallidum
  - d. Human Papilloma virus
  - e. Cytomegalovirus

END OF EXAM

## Otorhinolaryngology (ENT), Head & Neck Surgery Department

### Salivary Glands

Choose the single best answer.

This Paper consist of 30 MCQs and 6 pages.

**Duration: 30 mins**

1. Which of the following statements is true regarding the anatomy of the parotid gland?
  - a. The parotid duct emerges from the anterior boarder of the gland and pierces the buccinator at the level of the 2<sup>nd</sup> lower molar tooth
  - b. The external carotid artery gives off its branches before passing through the gland
  - c. The facial nerve passes directly over the superficial lobe of the parotid
  - d. The retromandibular vein passes through the gland
  - e. Facial nerve infiltration from intra-parotid lesions may result in sensory loss to the face
2. Wharton's duct drains
  - a. opposite the maxillary 2<sup>nd</sup> molar into the vestibule from the parotid
  - b. saliva into the submandibular gland
  - c. at the sublingual papillae lateral to the lingual frenulum
  - d. opposite the lower 2<sup>nd</sup> molar from the sublingual gland
  - e. the minor salivary glands
3. A 45-year-old woman presents with a painless slow growing swelling at the angle of her jaw. She has no facial asymmetry and all facial movements are normal. What is the most likely diagnosis?
  - a. Mucoepidermoid carcinoma
  - b. Pleomorphic adenoma
  - c. Cystadenoma lymphomatosum
  - d. Cylindroma
  - e. Warthim's tumour
4. The most common benign salivary gland tumour in children is
  - a. Haemangioma
  - b. Pleomorphic adenoma
  - c. Wharthin's tumour
  - d. Cystic hygroma
  - e. Adenolymphoma
5. Which of the following clinical signs is most likely to indicate that a parotid mass is malignant?
  - a. Rapid progressive painless enlargement
  - b. Nodular consistency
  - c. Preauricular lymphadenopathy
  - d. Facial paralysis
  - e. Pain

## Otorhinolaryngology (ENT), Head & Neck Surgery Department

6. Pleomorphic salivary adenoma
  - a. Presents as a slowly growing painless lump
  - b. Can present with facial nerve weakness
  - c. Treatment includes radiotherapy
  - d. Sentinel lymph node mapping is recommended
  - e. The minimum operation is a superficial parotidectomy
7. Regarding the salivary glands, which of the following statements is FALSE?
  - a. Pleomorphic adenoma is the most common benign tumour of the submandibular gland
  - b. Mikulic's Syndrome refers to the bilateral enlargement of lacrimal and salivary glands
  - c. Sialothiasis is almost exclusively a problem of the submandibular gland
  - d. Incisional biopsy is performed in all salivary gland tumours
  - e. Lingual nerve can be damaged in surgery on submandibular gland
8. Loss of sensation from the temporal region and loss of secretory function of the parotid gland would be caused by interruption of which nerve?
  - a. Auriculotemporal
  - b. Chorda tympani
  - c. Posterior auricular
  - d. Facial
  - e. Great auricular
9. Salivary calculi
  - a. Occur most frequently in the parotid gland
  - b. Are usually radio-opaque
  - c. May be removed through an oral incision
  - d. May be removed endoscopically
  - e. Produces pain when eating
10. Which of the following parotid malignancies shows perineuronal spread?
  - a. Adenoid cystic carcinoma
  - b. Adenocarcinoma
  - c. Mucoepidermoid carcinoma
  - d. Acinic cell carcinoma
  - e. Squamous cell carcinoma
11. Which tumour is least likely to occur in the minor salivary glands
  - a. Pleomorphic adenoma
  - b. Mucoepidermoid carcinoma
  - c. Adenoid cystic carcinoma
  - d. Wharthem's tumour
  - e. adenocarcinoma

## Otorhinolaryngology (ENT), Head & Neck Surgery Department

12. Commonest salivary gland malignancy in children

- a. Lymphoma
- b. Pleomorphic carcinoma
- c. Adenoid cystic carcinoma
- d. Mucoepidermoid carcinoma
- e. Acinic cell carcinoma

13. Which of the following salivary gland tumors has highest rate of malignant transformation?

- a. Parotid
- b. Submandibular
- c. Submaxillary
- d. Sublingual
- e. Minor

14. In submandibular gland surgery, the nerve least likely to be injured is:

- a. Inferior alveolar nerve
- b. Lingual nerve
- c. Hypoglossal nerve
- d. Marginal Mandibular branch of facial nerve
- e. Nerve to mylohyoid

15. Submandibular salivary gland is separated into superficial and deep portions by;

- a. Buccinator muscle
- b. Mylohyoid muscle
- c. Anterior Digastric muscle
- d. Sternomastoid muscle
- e. Geniohyoid muscle

16. Most common malignancy of the minor salivary glands is

- a. Mucoepidermoid carcinoma
- b. Adenocarcinoma
- c. Acinic cell carcinoma
- d. Adenoid cystic carcinoma
- e. Ameloblastoma

17. Parotid gland swellings (e.g. Mumps Parotitis) are very painful because

- a. The parotid gland is closely related to the external auditory canal
- b. The parotid glands suppurate easily
- c. There is no outer layer of fascia covering the parotid gland
- d. The outer layer (parotid fascia) is inelastic and firm
- e. The facial nerve which passes through the gland is compressed

## Otorhinolaryngology (ENT), Head & Neck Surgery Department

18. In parotid surgeries the most reliable way of identifying the facial nerve is
- By tracing it from the mastoid cavity
  - By removing the styloid process
  - Searching at the tympanomastoid sulcus
  - By using the tragal pointer
  - By finding the posterior digastric muscle
19. A 59-year-old female presents with recurrent painful swelling of the angle of the jaw. The pain usually occurs immediately prior to meals.
- Submandibular duct malignancy
  - Submandibular lymphadenitis
  - Submandibular gland infection
  - Submandibular duct obstruction
  - Submandibular gland cyst
20. A 60-year-old man presents with a swelling to the left preauricular region, which he has had for 3 months. He previously had surgery for a right parotid lesion. On examination all facial movements are normal. What is the most likely diagnosis?
- Wharthin's tumor
  - Pleomorphic adenoma
  - Cylindroma
  - Lymphoma
  - Mixed myoepithelial tumour
- A 64-year-old man is referred to the head and neck clinic with a lump to his jaw 2cm anterior to the tragus of his right ear. He describes rapid growth of the swelling over the previous 3 months associated with right sided facial droop.
21. What is the most likely diagnosis?
- Mucoepidermoid carcinoma
  - Adenocarcinoma
  - Acinic cell carcinoma
  - Squamous cell carcinoma
  - Adenoid cystic carcinoma
22. He presents a few months later for routine post-operative follow-up. He now complains of diffuse facial sweating before meals. This complication is likely due to
- Misdirected reinnervation of the greater auricular nerve
  - Due to missed facial nerve injury during the surgery
  - Abnormal regeneration of parasympathetic auriculotemporal nerve fibres
  - Abnormal regrowth of autonomic fibres from the greater petrosal nerve
  - Increased anxiety syndrome post-surgery



## Otorhinolaryngology (ENT), Head & Neck Surgery Department

23. Which of the following features is LEAST LIKELY to raise suspicion of a malignant salivary tumour?

- a. soft rubbery consistency
- b. rapid increase in size
- c. lower lip weakness
- d. nodal metastases
- e. minor salivary gland origin

24. Regarding the physiology of the salivary glands...

- a. Daily production of saliva is 5L per day
- b. Most of the saliva in the oral cavity is produced by minor salivary glands
- c. Saliva contains lysozymes, immunoglobulin IgA, electrolytes and mucin
- d. Saliva is produced at a high metabolic rate throughout the day
- e. Sympathetic stimulation results in increased production of saliva

25. Which of the following statements is FALSE?

“Parasympathetic innervation/Secretomotor fibres to...

- a. the parotid gland originates from the glossopharyngeal nerve”
- b. the sublingual gland, originates from the nerve of wrisburg via corda tympani”
- c. the minor salivary glands of the oral cavity originate from the glossopalatine nerve”
- d. the submaxillary gland originates from the nervus intermedius via corda tympani”
- e. the submandibular gland originates from the hypoglossal nerve”

26. Which of the following statements is FALSE?

- a. Causes of xerostomia includes; Sjogrens syndrome, irradiation, & Mumps
- b. Sialolithiasis occurs more commonly Stenson’s duct compared to Wharton’s duct
- c. Most (80%) salivary gland duct stones are radio-opaque
- d. Necrotizing sialometaplasia is a benign inflammatory condition that may mimic a malignancy
- e. Staphylococcus Aureus & streptococcus pyogenes are the most common causes of acute bacterial sialadenitis

27. Which of the follow statements is TRUE?

- a. Pleomorphic adenoma is the most common benign tumour to occur in the minor salivary glands
- b. most benign salivary gland tumours occur in the sublingual gland
- c. Incidence of malignant tumours in adults according to site is; parotid > submandibular > sublingual
- d. Most malignant tumours require treatment with pre-operative radiotherapy followed by surgery
- e. Frey’s syndrome and keloid formation are early complications of superficial parotidectomy

## Otorhinolaryngology (ENT), Head & Neck Surgery Department

28. A 70-year-old woman presents with a progressive swelling close to the body & angle of the mandible. O/E: she has weakness of the lower half of the orbicularis oris muscle and a 3cm (W) x5 cm(L) firm, nontender, immobile mass

The MOST likely diagnosis is

- a. Submandibular Dental abscess
- b. Plunging ranula
- c. Papillary cystadenoma lymphomatosum of the sublingual gland
- d. Squamous cell carcinoma
- e. Acute sialadenitis

29. Which of the following statements regarding salivary gland neoplasms is TRUE?

- a. Unlike in adults, the larger the gland of origin in children, the more likely that a tumor will be malignant.
- b. The imaging modalities to determine facial nerve infiltration in order of accuracy is: US> CT> MRI
- c. Incisional biopsy is the method of choice for diagnosing most salivary gland tumours
- d. Surgical enucleation of parotid gland tumours is the mainstay of therapy as it decreases recurrence rates
- e. Fine needle aspiration is contraindicated because potential fibrosis, haemorrhage and facial nerve palsy

30. Which of the following is INCORRECTLY MATCHED?

KEY: ACC- adenoid cystic carcinoma, MEC- Mucoepidermoid carcinoma

- a. ACC---associated with perineural invasion, & originate more commonly from minor salivary glands
- b. MEC---- associated with radiation exposure & is the most common salivary gland malignancy in children
- c. Pleomorphic adenoma----most common salivary gland tumour overall & most common benign tumour
- d. Warthin's tumour---- incidence greatest in young women who smoke, 50%-70% bilateral
- e. Acinic cell Carcinoma- slow growing & occurs most commonly in the parotid gland (90%)

## END OF EXAM

## Otorhinolaryngology (ENT)

### Thyroid & Parathyroids

Choose the single best answer.

**Duration: 30 mins**

This Paper consist of 30 MCQs and 6 pages.

#### Anatomy & Physiology

1. Regarding the parathyroid glands, which of the following statements is FALSE?
  - a. Superior parathyroid gland develops from the 4<sup>th</sup> pharyngeal pouch
  - b. Inferior parathyroid gland and thymus develops from the 3<sup>rd</sup> pharyngeal pouch
  - c. The location of the Inferior parathyroid glands varies widely, compared to the superior parathyroid glands
  - d. The parathyroid glands are supplied solely by a branch of the external carotid artery
  - e. Parathyroid hormone helps in the hydroxylation of 25-hydroxycholecalciferol to 1,25-dihydroxycholecalciferol
2. Regarding the arterial supply & venous drainage of the thyroid gland, which of the following is CORRECT?
  - a. A branch of the external carotid, supplies the thyroid & is a close relation to the recurrent laryngeal nerve
  - b. A branch of the thyrocervical trunk supplies the thyroid & is a close relation to a branch. of superior laryngeal nerve
  - c. The middle thyroid vein & superior thyroid vein drains into the external jugular vein
  - d. The inferior thyroid vein usually drains directly into brachiocephalic vein
  - e. The thyroid-ima artery, a branch of the innominate artery, supplies blood to the thyroid in about 1/3<sup>rd</sup> of patients
3. Regarding the physiology of the thyroid gland & parathyroid glands, which of the following is CORRECT?
  - a. Parathyroid hormone increases calcium excretion from the body and stimulates osteoclastic activity
  - b. A patient with ↑TSH & ↓FT3 is likely to present with diaphoresis, heat intolerance and tachyarrhythmias
  - c. A patient with ↓TSH & ↑FT3 is likely to complain of unintentional weight loss, diarrhea, and anxiety
  - d. The metabolic effects of thyroid hormone are mainly exerted by free T4
  - e. A patient with ↑TSH, ↑FT3 & ↑F4 is likely to be taking L-thyroxine tablets factitiously
4. Regarding the nerves in close relation to thyroid gland, which of the following statements is TRUE?
  - a. The right and left Inferior laryngeal nerves supplies all the laryngeal muscles except the cricothyroid muscle
  - b. The right recurrent laryngeal nerve loops around the aortic arch to supply the posterior cricoarytenoid muscle
  - c. The left recurrent laryngeal nerve curves around the subclavian artery to supply the cricothyroid muscle
  - d. Injury to the external branch of the superior laryngeal nerve results in loss of sensation above the glottis
  - e. Injury to the internal branch of superior laryngeal nerve may cause changes in pitch, range and projection of voice
5. Regarding the thyroid and parathyroid glands, which of the following statements is INCORRECT?
  - a. Thyroid cancer may result in a horner's syndrome due to infiltration of the superior cervical ganglion
  - b. Common carotid, vagus nerve, & internal jugular vein all occupy the carotid sheath posterior-lateral to the thyroid
  - c. The inferior thyroid artery normally runs anteriorly and perpendicular to the recurrent laryngeal nerve
  - d. The superior parathyroid glands lie more ventrally than the inferior parathyroid glands
  - e. Ectopic sites of the parathyroid glands include; superior mediastinum, retro-oesophageal, retro-pharyngeal

## Otorhinolaryngology (ENT)

### Questions 6-8 relate to the following clinical scenario

A 16-year-old girl presents to the clinic with a 1cm neck swelling that moves on tongue protrusion

6. The most likely surgical procedure that is required is....
  - a. thymectomy
  - b. Wide local excision
  - c. Simple cystectomy
  - d. Sistrunk's operation
  - e. Pyramidal lobe excision
7. Most common location of this swelling is
  - a. Below the hyoid bone, in, or slightly off, the midline
  - b. Sublingual, in the midline
  - c. Suprahyoid, just slightly off the midline
  - d. At the level of the cricoid cartilage
  - e. At the Tongue base
8. The mass moves with tongue protrusion due to its attachment with
  - a. "Berry's" ligament
  - b. Foramen lacerum
  - c. Foramen caecum
  - d. Thyro-hyoid ligament
  - e. Cricothyroid ligament

### The following clinical scenario relates to questions 9-11

A 29-year-old woman presents with a 4cm anterior neck mass that moves with swallowing. She has a history of radiotherapy as a child. Her thyroid function test is within normal limits.

9. What is the next step in the diagnosis?
  - a. Ultrasound
  - b. Core needle biopsy
  - c. Fine needle aspiration cytology
  - d. Computed tomography
  - e. Radionuclide scan
10. Microscopic examination shows, "orphan-annie" nuclei. The likely diagnosis is
  - a. Thyroid adenoma
  - b. Papillary thyroid carcinoma
  - c. follicular carcinoma
  - d. Medullary thyroid carcinoma
  - e. Anaplastic carcinoma
11. The patient eventually requires thyroid surgery however immediately following endotracheal extubation he develops severe inspiratory stridor. The most likely cause is
  - a. Unilateral recurrent laryngeal nerve paralysis
  - b. Bilateral recurrent laryngeal nerve paralysis
  - c. Tracheomalacia
  - d. Tracheal compression from an expanding haematoma
  - e. Bilateral Superior laryngeal nerve injury

## Otorhinolaryngology (ENT)

### Questions 12-17 relate to the following clinical scenario

A 38-year-old woman is found to have a thyroid nodule during routine clinical examination by her GP. She has a past history of laparoscopic removal of a left adrenal gland tumour. Routine blood test in the recent past have shown persistently, but mildly, elevated calcium levels. She has however been asymptomatic.

12. The likely diagnosis is
  - a. Multiple endocrine neoplasia type 1
  - b. Multiple endocrine neoplasia type 2a
  - c. Multiple endocrine neoplasia type 2b
  - d. Multiple endocrine neoplasia type 4
  - e. Polyendocrine syndrome type 2
  
13. A Mutation in which of the following oncogenes, is most associated with this condition
  - a. RET
  - b. BRAF
  - c. K-Ras
  - d. NTRK1
  - e. CTNNB1
  
14. Her elevated calcium is most likely due to
  - a. Parathyroid hyperplasia
  - b. Parathyroid carcinoma
  - c. A single Parathyroid adenoma
  - d. Multiple parathyroid adenomas
  - e. Malignant bone infiltration
  
15. The best imaging method to localize the source of her hypercalcemia is
  - a. Sestamibi scan
  - b. Ultrasound
  - c. CT scan
  - d. MRI neck & chest
  - e. Technetium scan
  
16. Microscopic examination of her thyroid nodule is likely to
  - a. Show intranuclear grooves
  - b. Giant cells & spindle cells
  - c. Reveal psammoma bodies
  - d. Stain positive for Congo red
  - e. Show Lymphovascular invasion
  
17. Which of the following should be monitored in this patient to check for tumour recurrence post-surgery?
  - a. Thyroglobulin levels
  - b. Calcitonin levels
  - c. Thyroid stimulating hormone
  - d. Anti-TPO levels
  - e. Thyroid stimulating immunoglobulins

## Otorhinolaryngology (ENT)

### **Questions 18-20 relate to the following clinical scenario**

An 89-year old female presents with stridor. A CT scan of her neck shows extensive infiltration of her trachea by a lesion arising from the thyroid gland. Fine needle aspiration of the gland shows cohesive clumps of cells.

18. The most likely diagnosis is
- Follicular variant of Papillary thyroid carcinoma
  - Medullary thyroid carcinoma
  - Follicular carcinoma
  - Lymphoma
  - Anaplastic thyroid carcinoma
19. What is her prognosis?
- Excellent, with a ~75%-90% chance of survival at 5 years once diagnosed and treated early
  - Fair, most patients have a 60% -80% chance of being alive at 5 years with early intervention
  - Maybe about a 25%- 55% chance of survival beyond 5 years with expert medical care
  - Poor, with a 12%-25% survival rate at 5 years even with adjunctive chemotherapy & radiotherapy
  - Dismal, with a 5-year survival rate of only 3%-7%, she is likely to have stage IV disease
20. Treatment of choice in her case is likely to be
- Radical excision
  - Chemoradiotherapy
  - Palliative care
  - Debulking surgery and tracheostomy
  - Partial thyroidectomy

### **Questions 21-23 pertain to the following clinical scenario**

A 55-yr-old man presented for a regular follow-up to your office 2 weeks ago at which time a palpable thyroid nodule of 1.7 cm was noted in the left thyroid lobe. He denies a history of neck radiation, hoarseness, pain, dysphagia or haemoptysis. His physical examination is otherwise normal, with no lab abnormalities.

21. What is the most appropriate next step in management?
- Ultrasound of the thyroid
  - TSH level
  - Fine needle aspiration
  - Observation
  - Suppressive therapy with levothyroxine
22. FNAC reveals features suggestive of papillary thyroid carcinoma and staging CT work-up reveals no distant metastases or lymphadenopathy. The most appropriate step in the management of this patient is
- Radioiodine therapy with I <sup>131</sup> only
  - Partial thyroidectomy only
  - Partial thyroidectomy and radioiodine therapy
  - Total thyroidectomy, lifelong Levothyroxine, and Radioiodine therapy
  - Total thyroidectomy, prophylactic neck dissection, lifelong levothyroxine

## Otorhinolaryngology (ENT)

23. A few hours after surgery, you are called to review the patient as he has developed sudden respiratory distress. His neck dressing bloodstained. and when removed shows that his neck is tense and bulging. What is the most appropriate immediate step?
- Urgent tracheostomy
  - Emergency cricothyroidotomy
  - laryngoscopy and endotracheal intubation
  - removal of the neck sutures, then transfer to the OR
  - Aspiration of the haematoma with a large bore needle
24. The patient does well & is eventually discharged. On review in the clinic several weeks later, his examination is unremarkable. However, you notice that his thyroglobulin levels have been rising. What is the next best step in his management?
- Ultrasound
  - Elective neck dissection
  - Therapeutic radioiodine
  - Tyrosine kinase inhibitor therapy
  - Computed tomography
25. A 45-year-old woman has a solitary, nonfunctioning thyroid nodule. Fine needle aspiration cytology has been non-diagnostic on at least two occasions. She is booked for surgical intervention. Which of the following is the initial surgical procedure of choice?
- Total thyroidectomy
  - Near total thyroidectomy
  - Total Lobectomy and isthmus resection
  - Subtotal lobectomy and isthmus resection
  - Total thyroidectomy and ipsilateral radical neck dissection
26. Which of the following statements about thyroid cancer is FALSE?
- The incidence of papillary thyroid cancer is increasing worldwide due to an over diagnosis of subclinical disease
  - Thyroid nodules in the young & elderly are less likely to be malignant when compared to middle-aged adults
  - Grade, age, metastases, extension and size are all factors used to predict survival in patients with thyroid cancer
  - Risk factors for thyroid carcinoma include male gender, neck radiation and family history of thyroid cancer
  - Ultrasound is the initial diagnostic imaging technique used in the workup of thyroid nodules
27. Grave's disease is due to
- Hypersecretion of thyroid stimulating hormones
  - Abnormal thyroid stimulating antibodies
  - Anti-mitochondrial antibodies
  - Increased secretion of thyroxine
  - Anti-thyroid peroxidase antibodies
28. Follicular carcinoma can be differentiated from a follicular adenoma by
- Presence of mitotic figures
  - fine needle aspiration cytology
  - presence of nodular hyperplasia
  - Presence Capsular and vascular invasion
  - Presence of I<sup>131</sup> uptake

## Otorhinolaryngology (ENT)

29. Lymphoma is most associated with

- a. Subacute thyroiditis
- b. Reidel thyroiditis
- c. Hashimotos thyroiditis
- d. Acute suppurative thyroiditis
- e. Silent thyroiditis

30. Which of the following statements regarding thyroid malignancies is INCORRECT?

- a. Follicular carcinoma is the 2<sup>nd</sup> most common histologic type and primarily spreads haematogenously
- b. Hürthle cell carcinoma is a variant of follicular thyroid cancer, diagnosed only by tissue histology
- c. Papillary carcinoma is almost never multifocal and has a poor prognosis if cervical lymph nodes are present
- d. Prophylactic thyroidectomy is recommended if a patient has the RET protooncogene and +ve family history of MTC
- e. Anaplastic carcinoma may result from a previously differentiated cancer such as follicular carcinoma

END OF EXAM



ENT Multiple Choice Practice Questions 2017

1. A 55-year-old woman presents with a unilateral conductive hearing loss and pulsatile tinnitus in the right ear. Otoscopy reveals a reddish-blue appearance to the tympanic membrane. The most likely diagnosis is?
  - a. Cholesteatoma
  - b. Presbycusis
  - c. Chronic Suppurative Otitis Media (CSOM)
  - d. Ramsay Hunt syndrome
  - e. Glomus tumour
2. A 35-year old woman is being reviewed in the outpatient clinic post total thyroidectomy. She was placed on L-thyroxine daily and asked to do a blood test prior to her clinic visit, which of the following is best for monitoring thyroid hormone replacement?
  - a. Free T3
  - b. Free T4
  - c. TSH
  - d. Thyroid binding Globulin
  - e. Radionuclide Scanning
3. A young boy presents to A&E with acute nose-bleed. He is stable and talking. The best course of action is
  - a. To pinch the bridge of the nose and ask him to lean backwards
  - b. Reassurance
  - c. Place cotton/gauze in each nostril
  - d. Place icepacks on the forehead
  - e. Pinch the soft part of the nose and ask him to lean forwards
4. A 27-year-old female presented with a 0.8 cm thyroid nodule. Fine needle aspiration confirms papillary cells. The next appropriate management is
  - a. Chemotherapy
  - b. Excisional biopsy of the nodule
  - c. Lobectomy plus isthmusectomy
  - d. Radical thyroidectomy
  - e. Radioactive iodine treatment
5. A 20-year-old girl presents with a 9-month history of neck swelling with thyrotoxic symptoms. On investigation increased T4 and decreased TSH with palpable 2cm nodule was found. Next investigation will be:
  - a. Computed tomography
  - b. Excisional biopsy of the nodule
  - c. Ultrasound
  - d. Needle Aspiration
  - e. Radionuclide scan

## ENT Multiple Choice Practice Questions 2017

A 65-year-old man had fine needle aspiration biopsy on his neck because of a central, enlarging tumour mass. Tissue analysis revealed that this was a thyroid neoplastic mass

6. Which of the following is the most likely possible cause of the problem?
  - a. Anaplastic carcinoma
  - b. Follicular adenoma
  - c. Follicular carcinoma
  - d. Metastatic carcinoma
  - e. Papillary carcinoma
  
7. He was treated with a subtotal thyroidectomy. Which of the following would most likely describe what was removed?
  - a. Removal of right and left lobe and isthmus
  - b. Removal of right and left lobe without isthmus
  - c. Removal of the medial part of each lobe and the isthmus
  - d. Removal of right lobe and isthmus
  - e. Removal of right lobe without isthmus
  
8. In the immediate post-operative period the surgeon was called back to see the patient because the patient had trouble breathing. Which of the following is a likely reason for this?
  - a. Damage to both recurrent laryngeal nerves
  - b. Damage to the left recurrent laryngeal nerve
  - c. Damage to the right external laryngeal nerve
  - d. Damage to/ removal of the parathyroid glands
  - e. Severe infection to the surgical site
  
9. A 42-year-old woman with recent onset type 1 diabetes mellitus went to her family physician because of increased agitation and a neck mass. She was diagnosed with Graves' disease. Which of the following biochemical profile is in keeping with this patient's diagnosis?
  - a. Decreased serum T4 and low T3 resin uptake
  - b. Elevated serum T4 and increased radioactive iodine intake
  - c. Elevated serum T4 and low radioactive iodine uptake
  - d. Elevated serum T4, elevated T 3 and elevated TSH
  - e. Elevated serum T4 and low T3 resin uptake

## ENT Multiple Choice Practice Questions 2017

A 45-year-old gentleman presented with right facial weakness of 24 hours duration. He denied any history of otologic symptoms or facial trauma. For the past six months, he has noticed a swelling in the right preauricular region, which has slowly increased in size but remains painless.

10. The most likely diagnosis is
  - a. Adenoid cystic Carcinoma
  - b. Bell's Palsy
  - c. Mucoepidermoid carcinoma
  - d. Pleomorphic adenoma
  - e. Sialadenitis
11. Which of the following would be least helpful in evaluating this patient?
  - a. Chest-Xray
  - b. Culture & sensitivity of the parotid secretions
  - c. CT scan of the parotid glands
  - d. Fine needle Aspiration Cytology
  - e. Ultrasound Examination of the parotid
12. Which of the following is an unlikely complication of parotidectomy?
  - a. Glossopharyngeal Neuralgia
  - b. Gustatory swelling
  - c. Haemorrhage from the maxillary artery
  - d. Paresthesia of the earlobe
  - e. Sialocoele
13. Which of the following is a feature of Frey's syndrome?
  - a. Aberrant regrowth of sympathetic fibres
  - b. Early complication of parotidectomy
  - c. Facial nerve palsy
  - d. Glossopharyngeal nerve fibres supplies the sweat glands
  - e. Greater auricular nerve neuralgia

## ENT Multiple Choice Practice Questions 2017

A 50-year-old gentleman who was previously well, experienced severe vertigo while turning towards the left in bed. Vertigo lasted for approximately 30 seconds and was associated with nausea, but no hearing loss or tinnitus. Since then he has also experienced transient vertigo on attempting to look upwards at tall buildings. His symptoms have persisted for approximately 2 weeks, although he has noticed some improvement with time.

14. Likely clinical findings:

- a. Air-fluid in the middle ear
- b. False Negative Rinnes test
- c. Normal otoscopic findings
- d. Upper motor neuron facial nerve palsy
- e. Vascular mass in the middle ear

15. The likely diagnosis is:

- a. Benign Paroxysmal Positional Vertigo
- b. Glomus Tympanicum
- c. Menieres disease
- d. Otitis media with effusion
- e. Vestibular Schwannoma

16. Which one of the following tests would be useful in establishing the diagnosis?

- a. Dix-Hallpike test
- b. Romberg's Test
- c. Schwabach Test
- d. Unterberger test
- e. Weber's Test

17. Identify the correct statement

- a. During the Romberg's test, the patient should maintain his gaze on the doctor's finger
- b. In unilateral conductive hearing loss, the Weber's test will typically lateralize to the contralateral ear
- c. The Dix Hallpike test begins with the patient in the supine position
- d. The Swabach test compares the patient's bone conduction to that of the examiner.
- e. The Unterberger test is another name for the Romberg's test

18. Which of the following features is not typical of Ménière's disease?

- a. Aural fullness
- b. Fluctuating vertigo
- c. High frequency hearing loss
- d. Tinnitus
- e. Vertigo that lasts for hours

ENT Multiple Choice Practice Questions 2017

19. A 38-year-old has uncontrolled anterior epistaxis and the decision is made for arterial ligation. Which artery would be first ligated?
- External Carotid
  - Greater palatine
  - Maxillary
  - Posterior ethmoid
  - Sphenopalatine
20. You are called by the bedside of a 35 year old restless and cyanosed woman 15 hours post thyroidectomy whose neck is swollen, has stridor and is cyanosed. The appropriate intervention is
- Aspirate the neck and leave a drain in the neck
  - Cut sutures and open the wound immediately
  - Emergency endotracheal intubation and Ambubag ventilation
  - Set up wide bore IV cannula and bolus with ringers lactate
  - Take blood and send for clotting studies
21. A 2-year old starts coughing repeatedly immediately after he was seen playing with a minute plastic toy, which cannot be found. His symptoms have seized for 5 minutes. Which of the following is the most appropriate management?
- Do Chest X-ray & CT if wheeze detected
  - Do Nasal endoscopy in the emergency department
  - Do rigid Oesophagoscopy
  - Observe and wait return of symptoms before acting
  - Perform upper and lower airway bronchoscopy
22. The recommended surgical treatment for a thyroglossal duct cyst is?
- Aspiration and monitor for recurrence
  - Cyst enucleation taking care to preserve vital neck structures
  - Excision of cyst and superior tract without damaging the hyoid bone
  - Sistrunk's operation
  - Wide excision of the fluctuant swelling
- A 27-year-old woman had fine needle aspiration cytology (FNAC) of a palpable left solitary thyroid nodule.
23. Which of the following is true?
- Follicular carcinoma is the most likely diagnosis
  - Follicular adenoma and follicular carcinoma have a similar appearance on FNAC
  - Papillary carcinoma cannot be differentiated from papillary adenoma
  - Lymph node metastasis is rare in papillary carcinoma
  - Papillary adenoma has a better prognosis than papillary carcinoma

ENT Multiple Choice Practice Questions 2017

24. Ten hours post total thyroidectomy, she is noted to have dyspnea and stridor and you are alerted by the ward sister to her condition. The treatment required is
- a. Check airway, pulse and blood pressure and do intubation
  - b. Removal of neck sutures
  - c. Cricothyroidotomy
  - d. Call senior staff and return patient to operating theatre for wound exploration
  - e. Tracheostomy and oxygen support
25. If the stridor occurred in the immediate post-operative period rather than 10 hours after surgery, which of the following would be the most likely cause of her stridor?
- a. Damage to both recurrent laryngeal nerves
  - b. Damage to the left recurrent laryngeal nerve
  - c. Damage to the right external laryngeal nerve
  - d. Damage to/ removal of the parathyroid glands
  - e. Haematoma of the surgical site
26. A 42-year old woman with recent onset type 1 diabetes went to her family physician because of increased agitation and a neck mass. She was diagnosed with Graves' disease. Which of the following is false?
- a. Thyroid enlargement is diffuse
  - b. Pretibial myxedema is present in a minority of cases
  - c. Exophthalmos is a common finding
  - d. Women are affected 10 times more frequently than men
  - e. Elevated T4, T3 and TSH levels is typical
27. A 35-year-old woman is diagnosed with follicular neoplasm on fine needle aspiration cytology of the thyroid. Which of the following statements is correct?
- a. Follicular adenomas are the commonest tumours of the thyroid gland
  - b. Follicular adenomas are surrounded by fibrous capsule
  - c. Capsular invasion differentiates a carcinoma from this tumour
  - d. To differentiate this tumour from a carcinoma a tissue specimen is required
  - e. Follicular adenomas are often functional
28. The recommended surgical treatment for a thyroglossal cyst is?
- a. Aspiration and monitor for recurrence
  - b. Cyst enucleation taking care to preserve vital neck structures
  - c. Excision of cyst and superior tract taking care to preserve the hyoid bone
  - d. Excision of the cyst superior tract and part of the hyoid bone
  - e. Wide excision of the fluctuant swelling

29. A 28-year-old lady presents with a painless 3 cm. swelling in the neck. Thyroid function tests show that she is hyperthyroid, and a thyroid scan shows increased uptake. Which of the following statements is correct?
- a. If a fine needle aspiration shows follicular cells surgery will not be necessary
  - b. A carcinoma of the thyroid gland does not occur in patients who have a hyperfunctioning nodule
  - c. Papillary carcinomas spread by the haematogenous route and result in distant bone metastases.
  - d. Medullary carcinoma of the thyroid is likely in this patient because of her age
  - e. The presence of Psammoma bodies is common in papillary thyroid neoplasms.
30. A 35-year-old gentleman presented with a history of progressive, bilateral hearing loss for two years. There was no history of head trauma, otorrhoea, otalgia, or the use of ototoxic medications. The otoscopic findings were normal on the right, while on the left he had a pink, vascular area posteroinferiorly in the tympanic cavity. The Rinne's test was negative bilaterally, while the Weber's test lateralised to the left ear.

The most likely diagnosis is

- a. Glomus tumour
  - b. Otosclerosis
  - c. False-negative Rinne's test
  - d. Chronic mucoid otitis media
  - e. Chronic suppurative otitis media
31. Impedance tympanometry is likely to demonstrate the following curve.
- a. Type E
  - b. Type B
  - c. Type C
  - d. Type Ad
  - e. Type As
32. Which of the following is not recommended in the treatment of this condition?
- a. Hearing aid
  - b. Sodium fluoride therapy
  - c. Stapedectomy
  - d. Grommet insertion
  - e. Stapedotomy

33. Identify the correct statement regarding this disorder

- a. autosomal dominant inheritance
- b. strongly linked to *Pseudomonas aeruginosa*
- c. associated with pheochromocytoma
- d. the malleus is the most common ossicle involved
- e. More frequently diagnosed in males than in females

A 26-year-old obese male presents with a 3-month history of right-sided nasal obstruction, right sided hearing loss and aural fullness, bloodstained postnasal discharge and right-sided cervical lymphadenopathy

34. The most likely diagnosis is

- a. Chronic sinusitis
- b. Angiofibroma
- c. Nasopharyngeal carcinoma
- d. Nasal polyps
- e. Adenoidal hyperplasia

35. Assessment of the extent of this disorder is best established by

- a. Post nasal space x-rays
- b. CT scan
- c. Angiogram
- d. Anterior rhinoscopy
- e. Pneumatic otoscopy

36. The most common histology is

- a. Hamartoma
- b. Lymphoid hyperplasia
- c. Squamous cell carcinoma
- d. Adenocarcinoma
- e. Ewing's sarcoma

37. Which of the following is not usually removed in a radical neck dissection?

- a. Accessory nerve
- b. Internal jugular vein
- c. Sternocleidomastoid muscle
- d. Lymph nodes in the submucosal triangle
- e. Phrenic nerve



38. The most common benign tumor of the minor salivary gland.
- a. Muroid cystic adenoma
  - b. Warthin tumor
  - c. Pleomorphic adenoma
  - d. Adenolymphoma
  - e. Pott's puffy tumour
39. Which of the following is true of the external auditory canal?
- a. 1-3cm in length in adults
  - b. Posterior wall is longer than the anterior wall
  - c. The lateral wall mostly is cartilagenous
  - d. Amplifies sound in the 3-4 kHz range
  - e. Parasympathic sensory supply is from the glossopharyngeal nerve
40. Which of the following is the most likely cause of unilateral nasal obstruction?
- a. Simple nasal polyps
  - b. Allergic rhinitis
  - c. Vasomotor rhinitis
  - d. Inverted papilloma
  - e. Septal haematoma
41. Which of the following tests is not appropriate for a two year old child?
- a. Otoacoustic emissions
  - b. Auditory brainstem response
  - c. Pure tone audiometry
  - d. Impedance tympanometry
  - e. Behavioral audiometry
42. A 14-year-old boy is referred to you for nasal obstruction and frequent nosebleeds. Which of the following is the most likely diagnosis?
- a. inverted papilloma
  - b. juvenile angiofibroma
  - c. nasal polyps
  - d. nasopharyngeal carcinoma
  - e. adenoidal hypertrophy

ENT Multiple Choice Practice Questions 2017

43. A 56-year-old woman presents with a lump on the left side of her neck which has been slowly enlarging over the last few months. On examination, there is a 2 cm firm, painless, mobile lump near the angle of the left jaw. She is still able to move her facial muscles. What is the most likely diagnosis?
- a. Chemodectoma
  - b. Pleomorphic adenoma
  - c. Salivary duct carcinoma
  - d. Salivary duct stone
  - e. Sternocleidomastoid tumour
44. A 46-year-old woman presents to the GP complaining of gradually progressive hearing loss, imbalance and tingling on the left side of her face. On examination, the patient admits that a vibrating tuning fork is louder when placed by the ear on the left side, rather than on the mastoid process. Which of the following is the most likely cause of her symptoms?
- a. Acoustic neuroma
  - b. Ménière disease
  - c. Otosclerosis
  - d. Perforated eardrum
  - e. Presbycusis
45. A 71-year-old man presents to the GP with a painful, enlarging lump just in front of his right ear, which has been present for 2 months. He woke this morning to find that the right side of his face was drooping. What is the most likely cause of his symptoms?
- a. Acute bacterial sialolithiasis
  - b. Parotitis
  - c. Pleomorphic adenoma
  - d. Salivary gland calculi
  - e. Salivary gland carcinoma
46. A 71-year-old man presents to the GP with a painful, enlarging lump just in front of his right ear, which has been present for 2 months. He woke this morning to find that the right side of his face was drooping. What is the most likely cause of his symptoms?
- a. Acute bacterial sialolithiasis
  - b. Parotitis
  - c. Pleomorphic adenoma
  - d. Salivary gland calculi
  - e. Salivary gland carcinoma
47. Treatment for carcinoma maxillary sinus is:
- a. Radiotherapy
  - b. Radiotherapy followed by surgery
  - c. Maxillectomy followed by radiotherapy
  - d. Chemotherapy only
  - e. Antral washout

48. Sphenopalatine foramen lies posterosuperior to:

- a. Bulla ethmoidalis
- b. Middle turbinate
- c. Superior turbinate
- d. Inferior turbinate
- e. Posterior Choanae

49. A 45-year-old diabetic man presents to his GP with a 2-week history of progressively worsening sweating from the left side of his face during meals. Six months prior to this, he underwent excision of a pleomorphic adenoma from his left parotid gland. The GP diagnoses Frey's syndrome and advises the patient about the various management options. Which of the following statements is correct regarding Frey's syndrome?

- a. A positive starch-iodine test is diagnostic
- b. It can lead to sialolithiasis if left untreated
- c. It is caused by growth of the divided sympathetic nerve fibres into the skin
- d. It occurs in about 65% of patients who have undergone surgery to the parotid gland
- e. Treatment using 1% glycopyrrolate lotion is based on a sympatholytic effect

50. A 30-year-old-man sustains a fall and presents with bleeding from his right nostril. On examination, he looks well and is haemodynamically stable. Anterior rhinoscopy reveals bleeding from the anterior part of the nasal septum corresponding to Little's area. Which of the following arteries is not responsible for the epistaxis?

- a. Sphenopalatine artery
- b. Greater palatine artery
- c. Anterior ethmoidal artery
- d. Superior septal perforator artery
- e. Superior labial artery

**Section B**

A 15-year-old boy is brought to medical attention with a history of hearing loss in the left ear, blood stained postnasal discharge and bilateral, upper cervical lymphadenopathy for three months.

1. Which of the following investigations would be most appropriate in this patient to confirm the diagnosis?
  - a. Plain post nasal space X-rays
  - b. Chest X-ray
  - c. Deep biopsies of the postnasal space
  - d. CT scan
  - e. Ultrasound
2. The primary modality of treatment of nasopharyngeal carcinoma is?
  - a. Chemotherapy
  - b. External beam radiotherapy
  - c. Surgery
  - d. Surgery and adjuvant radiotherapy
  - e. Intra-cavitary radiotherapy
3. Which of the following is not found on the lateral nasal wall?
  - a. The middle meatus
  - b. Kiesselbachs plexus
  - c. Inferior turbinate
  - d. Bulla Ethmoidalis
  - e. Uncinate process
4. Which of the following blood vessels do not give a contribution to Little's Area?
  - a. Anterior ethmoidal artery
  - b. Posterior Ethmoidal Artery
  - c. Ascending branch of the greater palatine artery
  - d. Sphenopalatine artery
  - e. Lateral nasal Artery
5. Complications of submandibular gland excision include all the following except;
  - a. Glossopharyngeal nerve palsy
  - b. Lingual nerve damage
  - c. Excessive bleeding from the facial artery
  - d. Marginal mandibular nerve palsy
  - e. Hypoglossal nerve injury

6. Tonsillectomy is indicated in
- a. Candidiasis of the pharynx
  - b. Kaposi's sarcoma
  - c. Removal of styloid process in eagles syndrome
  - d. Wegener's granulomatosis
  - e. Postnasal drip symptoms
7. A thyroglossal duct cyst moves on protrusion of the tongue because;
- a. It is attached to the thyroid gland
  - b. Embryologically it descended through the cricoid cartilage
  - c. It consist of fibrous tissue attached to the trachea
  - d. It descends from the foramen caecum
  - e. It is found in the midline
8. The sphenopalatine artery arises from the;
- a. Maxillary artery
  - b. Anterior ethmoidal artery
  - c. Posterior ethmoidal artery
  - d. Internal carotid artery
  - e. Facial artery
9. All of the following can be found in otosclerosis except;
- a. A sensorineural hearing loss
  - b. A family history of otosclerosis
  - c. Paracusis willissii
  - d. Canal paresis
  - e. Over correction following stapedectomy
10. In endoscopic sinus surgery all of the following are potential complications except;
- a. CSF leak
  - b. Blindness
  - c. Nasolacrimal duct stenosis
  - d. Cerebellar infarction
  - e. Orbital haematoma
11. In chronic suppurative otitis media the commonest ossicular erosion occurs in the
- a. Footplate of the stapes
  - b. Long process of the incus
  - c. Handle of the malleus
  - d. The body of the malleus
  - e. Superstructure of the stapes

12. Which of the following is conclusive of a right conductive hearing loss

- a. A negative Rinne's test on the right ear
- b. A decrease in right ear conduction on pure tone audiometry
- c. The weber test lateralizing to the right
- d. An air bone gap on pure tone audiometry in the right ear
- e. A decrease in bone conduction in a pure tone audiogram in the right ear

13. A 30-year-old patient presents with a two-day history of otalgia. The most likely diagnosis would be

- a. Meniere's
- b. Otitis Externa
- c. Cervical adenitis
- d. Otitis externa
- e. Otosclerosis

14. The most common presenting feature of nasopharyngeal carcinoma is?

- a. Cervical lymphadenopathy
- b. Otitis media with effusion
- c. Unilateral epistaxis
- d. Ophthalmoplegia
- e. Skull base erosion

A 14-year-old girl was referred by her school doctor after noticing a swelling in the anterior triangle of her neck. She was previously well and had no family history of a similar swelling. On examination by the surgical team she had mild diffuse enlargement of her thyroid gland. Ultrasound of the gland shows no nodules and fine needle aspiration revealed hyperplastic colloid. Ultrasound of the gland showed no nodules.

15. In advising the mother, which is the most appropriate course of management?

- a. Reassurance and offer clinical follow up
- b. Subtotal thyroidectomy during the holidays
- c. Suppressive therapy with L-thyroxine
- d. Hemithyroidectomy during the holidays
- e. Ablation with radioactive iodine

16. A 36-year-old woman was referred to the surgical clinic with a six month history of a thyroid enlargement. She had a history of hypertension. Controlled on hydrochlorothiazide. On examination she was found to have a 1.5x2cm nodule in the right side of the gland, which was confirmed on ultrasound. Fine needle aspiration revealed neoplastic follicular cells, which is the MOST appropriate intervention in her management?
- a. Right hemithyroidectomy
  - b. Subtotal thyroidectomy
  - c. Ablation with radioactive iodine
  - d. External beam radiation to the gland
  - e. Total thyroidectomy
17. A 23-year-old woman undergoes a total thyroidectomy for carcinoma of the thyroid gland, on the second postoperative day, she begins to complain of a tingling sensation periorally and in her hands. She appears quite anxious and later complains of muscle cramps. The MOST appropriate initial therapy would be:
- a. 10 ml of 10% magnesium sulphate intravenously
  - b. calcium gluconate infusion
  - c. oral calcitriol
  - d. oral calcium gluconate
  - e. oral vitamin D
18. The most common bilateral nasal mass is due to
- a. Inverted papilloma
  - b. Inflammatory nasal polyps
  - c. Pyogenic granuloma
  - d. Antrochoanal polyp
  - e. Teratoma
19. Mechanical causes of dysphagia include the following except?
- a. Gastro-oesophageal reflux disease
  - b. Globus hystericus
  - c. Oesophageal cancer
  - d. Retained foreign body
  - e. Ingestion of sodium hydroxide

20. A 27-year-old woman presents to the surgical clinic with a 3-month history of increasing difficulty in swallowing. Over this period she also reports 5kg weight loss and has been admitted previously for recurrent chest infections. A Barium Swallow was requested and shows a “bird beak appearance” in the distal oesophagus. oesophageal manometry of the lower oesophageal sphincter (LOS) reveals hypertensive tone.

In Achalasia of the oesophagus:

- a. The patient is able to swallow liquids better than solids initially
  - b. The patient is able to swallow solids better than liquids initially
  - c. Oesophagectomy is the preferred surgical approach
  - d. Megaoesophagus is not a feature
  - e. The causative organism is *Trypanosoma cruzi*
21. Which of the following salivary gland malignancies is post operative radiotherapy NOT indicated?

- a. Acinic cell carcinoma
- b. Squamous Cell carcinoma
- c. Malignant mixed tumour
- d. Adenoid cystic carcinoma
- e. High grade mucoepidermoid carcinoma

A 21-year-old woman with a Marfanoid habitus is referred to a general surgeon because of a persistently enlarged cervical lymph node unresponsive to antibiotic therapy. She complains of episodic facial flushing diaphoresis and palpitations, and is found to be hypertensive. Biopsy of the cervical lymph node revealed metastatic thyroid carcinoma.

22. Which of the following types of thyroid carcinoma is most likely in this patient?

- a. Anaplastic carcinoma
- b. Follicular carcinoma
- c. Medullary carcinoma
- d. Papillary carcinoma
- e. Insular carcinoma

23. Which of the following findings is most likely on histological examination of the resected thyroid gland?

- a. Amyloid stroma
- b. Hyperplastic lymphoid follicles
- c. Optically clear nuclei
- d. Psammoma bodies
- e. Nuclear grooves



24. All of the following are indications for an elective tracheostomy EXCEPT;
- a. Prolonged intubation
  - b. Patient with a C4-C5 spinal cord injury
  - c. Angio-neurotic edema
  - d. Major head and neck injury
  - e. Excessive tracheobronchial injury
25. A 46 year old woman presents to the surgery clinic with a painless anterior neck mass. Examination reveals a 3x3cm firm mass, which moved on swallowing. Which of the following statements best describes further management of this patient?
- a. A thyroid scan should be done to determine whether the mass is hot or cold
  - b. Lugol's iodine may be used approximately two months before the surgery to reduce vascularity of the gland
  - c. Accurate management decisions can be made with the aid of a thyroid fine aspiration cytology and thyroid ultrasound only
  - d. Features of a papillary neoplasm on fine needle aspiration cytology mandate surgical treatment
  - e. A solitary nodule on ultrasound is in keeping with Plummer's disease and is best treated with subtotal thyroidectomy
26. A 25-year-old female is diagnosed with papillary carcinoma of the thyroid gland. Which of the following statements about this type of tumour is most accurate?
- a. It is a slow growing tumour which is influenced by thyroid stimulating hormone secretion
  - b. It is multifocal and spreads mainly by the blood to bone
  - c. It is sometimes associated with pheochromocytoma and skin lesions
  - d. It produces calcitonin and the syndrome of malignant hypocalcemia
  - e. It is extremely radiosensitive and is best treated by irradiation
27. A 35-year-old woman diagnosed with a multinodular goiter confirmed by ultrasound 5 years ago, presents with a recent onset of heat intolerance, anxiety and palpitations. The most likely diagnosis is?
- a) Grave's disease
  - b) Follicular adenoma
  - c) Papillary carcinoma
  - d) Plummer's disease
  - e) L-Thyroxin overdose

28. A 76-year-old man presents to his general practitioner with a rapidly growing lump in his neck. It is now causing him difficulty swallowing. Examination reveals a 4cm hard mass in the front of his neck that is fixed to the overlying skin. What is the most likely diagnosis?

- a) Follicular Carcinoma
- b) Anaplastic carcinoma
- c) Grave's disease
- d) Papillary carcinoma
- e) Toxic Multinodular goiter

A 45-year-old patient presents with severe dull pain within the right ear that has radiated to include the pinna. The patient reports a ringing in the ears. On examination there are small blisters over the auricle and in the external auditory canal. The patient has some difficulty closing the right eye

29. Which of the following is the **MOST** likely diagnosis?

- a. Malignant Otitis Externa
- b. Ramsay-Hunt Syndrome
- c. Bell's Palsy
- d. Gradenigo's syndrome
- e. Herpes zoster Ophthalmicus

30. What is the likely aetiologic agent?

- a. Pseudomonas aeruginosa
- b. Staphylococcus aureus
- c. Human immunodeficiency virus
- d. Herpes zoster Virus
- e. Haemophilus influenza

31. Appropriate treatment involves

- a. Urgent mastoidectomy
- b. Intravenous antibiotic therapy
- c. Immediate surgical repair of the facial nerve
- d. Antiretroviral therapy
- e. Acyclovir

32. A 40-year-old woman presents with a 10-year history of progressive left sided hearing loss. She has no other otological symptoms and has no history of hearing problems. On examination both eardrums are normal. Rinne's test is positive on the right and negative on the left. Weber's test lateralizes to the left.

The most likely diagnosis is:

- a. Left chronic suppurative otitis media-attico-antral type
  - b. Left chronic suppurative otitis media-Tubo-tympanic type
  - c. Right acoustic neuroma
  - d. Right ossicular dislocation
  - e. Left otosclerosis
33. Which of the following conditions is not likely to present with unilateral earache in the absence of otitis
- a. Temporomandibular joint dysfunction
  - b. Carcinoma of the piriform fossa
  - c. Quinsy
  - d. Tonsillar hypertrophy
  - e. Dental abscess
34. Which one of the following is considered a subjective investigation?

- a. Pure Tone Audiometry
- b. Otoacoustic emissions
- c. Brainstem electrical responses
- d. Tympanometry
- e. Electrocochleography

A 6 year-old boy underwent resection of a raspberry-like 0.8cm diameter laryngeal mass. He had resections of similar masses on 3 previous occasions. The histology of each was similar and showed multiple finger-like projections composed of fibrovascular cores covered by squamous epithelium.

35. What is the most likely diagnosis?

- a. Laryngeal carcinoma
- b. Laryngeal lymphoma
- c. Laryngeal nodule
- d. Laryngeal papillomatosis
- e. Laryngeal polyps

36. What is the most likely aetiology of this lesion?
- a. Haemophilus influenza
  - b. Human papilloma virus
  - c. Previous laryngeal surgery
  - d. Cigarette smoke
  - e. Voice abuse
37. Which of the following laryngeal structures is the most likely anatomical location of this lesion?
- a. Aryepiglottic fold
  - b. Epiglottis
  - c. Subglottis
  - d. Vocal cord
  - e. Piriform sinus
38. Medullary thyroid carcinoma is one of the less common cancers affecting the thyroid gland. Which one of the following statements about this condition is TRUE?
- a. Spread is primarily via lymphatics
  - b. Preferred treatment is lobectomy
  - c. Psammoma bodies are a histologic finding
  - d. FNAC is usually diagnostic
  - e. Capsular invasion distinguishes an adenoma from carcinoma
39. A 5-year-old boy has a tonsillectomy. Three hours later the ward nurse calls you and states that the patient is restless. His pulse rate is 160/minute and the blood pressure is 85/45 mmHg. Which of the following would be the most appropriate action to take?
- a. Administer analgesia for post-operative pain
  - b. Arrange for the patient to suck ice cubes
  - c. Spray adrenaline solution to the tonsillar bed
  - d. Prepare to take the patient back to the operating theatre
  - e. Check and Suction airway
40. A twenty-year-old woman accidentally swallowed a penny which of the following sites is the coin most likely lodged?
- a. Cricopharyngeal narrowing
  - b. Thoracic Inlet
  - c. Aortic arch
  - d. Upper oesophageal sphincter
  - e. Lower Oesophageal sphincter

41. A 25-year-old woman has a freely mobile 10 cm thyroid nodule. In addition to the history and exam. Which of the following is the most essential component of her management?
- a. Fine needle aspiration
  - b. Observation
  - c. Radioactive iodine scan
  - d. Technetium scan
  - e. Ultrasonography
42. Surgical management of Thyroid Medullary carcinoma involves:
- a. Total thyroidectomy
  - b. Subtotal thyroidectomy
  - c. Partial thyroidectomy
  - d. Iodine 131 Radio-ablation
  - e. Near-total thyroidectomy
43. Damage to the recurrent laryngeal nerve will result in:
- a. The ipsilateral cord to assume a paramedian position
  - b. Severe hoarseness with intermittent loss of speech
  - c. A reduction in tidal volume with respiration
  - d. The contralateral cord to assume a more lateralized position
  - e. Paralysis of the Right cord more frequently than the left.
44. An elderly patient has acute onset unilateral deafness, tinnitus & vertigo. What is the MOST likely diagnosis?
- a. Meniere's disease
  - b. Acoustic neuroma
  - c. Vestibular neuronitis
  - d. Otosclerosis
  - e. Ramsay-Hunt syndrome

45. A 65-year-old man presents to clinic with a history of an occasionally painful lump under the left side of the jaw. Pain increases just before eating. Bimanual examination of the floor of mouth is normal. What should you do next?
- a. Sialogram of the submandibular gland
  - b. Sialogram of the Parotid gland
  - c. Intraoral x-ray
  - d. Orthopantomagram
  - e. Ultrasound of the Submandibular region
46. A young girl is sent to the SOPD for clinic review. A soft, painless, fluctuant swelling is palpated in the anterior triangle of the neck, which appears to be emerging from the anterior boarder of the upper 1/3 of sternocleidomastoid. Your next step would be?
- a. CT scan
  - b. Ultrasound
  - c. FNAC
  - d. Surgical Removal
  - e. Review in clinic after 6 months
47. A Middle aged woman undergoes a sub-total thyroidectomy and the same night while on the ward the patient suddenly starts to feel breathless and there is stridor on inspiration. What is the most appropriate immediate intervention to undertake?
- a. Open the wound on the ward
  - b. Intubation
  - c. Open the wound in theatre
  - d. Needle aspiration of haematoma
  - e. Call your senior
48. Epistaxis is unlikely to arise from:
- a. Injury to the turbinates
  - b. Spontaneous bleed from Little's area
  - c. Anticoagulation therapy
  - d. Enlarged adenoids
  - e. Nasal Bone Fracture

49. A 30-year-old female lead singer presents with progressive hoarseness and vocal fatigue. Fiber optic laryngoscopy shows symmetric lesions at the junction of the anterior 1/3 and posterior 2/3 of the vocal cords. The diagnosis is likely due to:
- a. Singer's nodule
  - b. Laryngeal papillomata
  - c. Reinke's oedema (bilateral diffuse polyposis)
  - d. Thyroid carcinoma
  - e. Vocal cord polyps
50. A 17-year-old girl presents to the ENT-outpatient clinic with a central neck mass that moves on protrusion of the tongue. Definitive treatment involves
- a. Hemi-thyroidectomy
  - b. Incision and drainage
  - c. Surgical removal with a section of the hyoid bone
  - d. Antibiotics
  - e. Radioiodine ablation

## Section A

A 14 year old male presented with hoarseness, frequent episodes of coughing during meals and left sided hearing loss. His symptoms started over a month ago and have gradually worsened with time. One month ago he developed a left-sided neck mass

1. Which of the following investigations is least useful in the management of this patient.
  - a. CT scan of the base of the skull
  - b. MRI scan of the base of the skull and neck
  - c. Indirect laryngoscopy
  - d. Fine needle aspiration cytology of the neck mass
  - e. Lateral x-ray of the neck
2. The Rinne test was positive on the right and negative on the left. Possible diagnoses include all of the following with the exception of?
  - a. Profound left sensorineural hearing loss
  - b. Left otitis media with effusion
  - c. Otosclerosis
  - d. Left acoustic neuroma with 50 dB hearing loss
  - e. Perforation of the left tympanic membrane
3. Biopsy of the neck mass is positive for latent membrane protein 1. The likely diagnosis is?
  - a. Carcinoma of the larynx
  - b. Chondromyosarcoma of the larynx
  - c. Reactive hyperplasia of the cervical lymph node
  - d. Nasopharyngeal carcinoma
  - e. Acoustic neuroma
4. Which of the following is not strongly linked to this condition?
  - a. Chinese Ethnicity
  - b. Epstein Barr virus
  - c. Cigarette smoking
  - d. Nitrosamines
  - e. Cantonese-style salted fish
5. What is the most common treatment modality for this condition
  - a. Chemoradiation
  - b. Microscopic laryngoscopy
  - c. Radical neck dissection
  - d. Radical radiation of the nasopharynx
  - e. supportive therapy with acyclovir



A 56-year-old female presented with a 5cm diameter firm mass just inferior to the left angle of the mandible. The lesion has been present for the past six months and has been increasing in size. Over the past 48 hours she has developed weakness of the left marginal mandibular nerve

6. Which of the following is not the likely diagnosis?
  - a. Adenoid cystic carcinoma of the submandibular gland
  - b. Mucoepidermoid carcinoma of the parotid gland
  - c. Submandibular duct sialolithiasis
  - d. Metastatic squamous cell carcinoma of the lateral tongue
  - e. Metastatic Adenocarcinoma of the minor salivary gland
7. The surgeon decides to do an excisional biopsy of the mass. Which of the following is the least likely complication?
  - a. Paresthesia in the distribution of the laryngeal nerve
  - b. Hypoglossal nerve palsy
  - c. Hemorrhage from the facial artery
  - d. Injury to the glossopharyngeal nerve
  - e. Hemorrhage from the facial vein
8. Which of the following is not usually removed in a radical neck dissection?
  - a. Accessory nerve
  - b. Internal jugular vein
  - c. Sternocleidomastoid muscle
  - d. Lymph nodes in the submucosal triangle
  - e. Phrenic nerve

## Section B

9. Which of the following does not supply blood to Kiesselbach's plexus?
  - a. Anterior sphenoidal artery
  - b. Lesser Palatine artery
  - c. Sphenopalatine artery
  - d. Posterior sphenoidal artery
  - e. Inferior labial artery
10. Which of the following is true of the external auditory canal?
  - a. 1-3 cm in length in adults
  - b. Posterior wall is longer than the anterior wall
  - c. The medial 1/3<sup>rd</sup> is mostly cartilaginous
  - d. Amplifies sound in the 2-4 kHz range
  - e. Parasympathetic sensory supply is from the glossopharyngeal nerve

11. The most common benign tumor of the minor salivary glands is...
- Mucoidcystic adenoma
  - Warthin tumor
  - Pleomorphic adenoma
  - Adenolymphoma
  - Pott's puffy tumour
12. Which of the following is the most likely cause of unilateral nasal obstruction?
- Simple nasal polyps
  - Allergic rhinitis
  - Vasomotor rhinitis
  - Inverted papilloma
  - Septal haematoma
13. Which of the following is correct regarding Cholesteatomas of the middle ear?
- Typically inherited as an autosomal recessive disorder
  - Higher incidence in males than in females
  - Otoscopy is normal in the vast majority of patients
  - The incus is the ossicle most commonly affected
  - Hearing tests are usually not beneficial in chronic cases
14. Which of the following is NOT associated with medullary carcinoma of the thyroid?
- Phaeochromocytoma
  - Mucosal neuromas
  - RET proto-oncogene
  - Hypocalcemia
  - High serum calcitonin levels
15. Which of the following tests is not appropriate for a two-year-old child?
- Otoacoustic emissions
  - Auditory brainstem response
  - Pure tone audiometry
  - Impedance tympanometry
  - Behavioral audiometry
16. Which of the following is not a likely cause of massive epistaxis?
- Nasopharyngeal carcinoma
  - Olfactory neuroblastoma
  - Angiofibroma
  - Treatment of pulmonary embolism
  - Le Fort III fracture

17. A 25-year-old gentleman presented with persistent right sided obstruction for the past 4 years. Cultures would most likely grow.

- a. *Staphylococcus aureus*
- b. *Hemophilus Influenzae*
- c. Beta hemolytic Streptococcus
- d. *Pseudomonas aeruginosa*
- e. *Moraxella catarrhalis*

18. Which of the following is a feature of Meniere's disease?

- a. Especially involves hearing loss in high frequencies
- b. Especially vertigo, ear discharge and otalgia at nights
- c. Associated with increased perilymphatic fluid
- d. Patients present with Conductive hearing loss
- e. Commonly presents with fluctuating sensorineural hearing loss

19. Malignant otitis externa...

- a. Is associated with low E.S.R.
- b. Is an aggressive squamous cell carcinoma
- c. Is best treated with empirical brain audiometry
- d. Is frequently linked to Beta-hemolytic Streptococcus infections
- e. May result in granulation tissue in the floor of the external canal

20. Which of the following is not an appropriate therapy for otitis media with effusion?

- a. Grommet insertion
- b. Adenoidectomy
- c. Antihistamines
- d. Oral steroids
- e. Oral antibiotics

21. Which of the following is not appropriate in the management of epistaxis in a patient with juvenile angiofibroma?

- a. Nasal endoscopy with biopsy of the lesion in the clinic
- b. CT with contrast
- c. MRI scan
- d. Embolization
- e. Ligation of the sphenopalatine artery

22. Identify the correct statement.
- The nasolacrimal duct drains into the superior meatus
  - The ostium of the maxillary sinus drains into the hiatus semilunaris
  - The posterior ethmoidal sinuses drain into the sphenopalatine recess
  - The sphenoidal sinus drains into the middle meatus
  - The uncinate process is located at the posterior nasal cavity
23. Which of the following is not an appropriate part of treatment of Zenker's diverticulum?
- Cricopharyngeal myotomy
  - diverticulostomy
  - Nissen funduplication
  - Dohlman's procedure
  - Inversion of the sac
24. Speech production post-total laryngectomy is best achieved by
- Oesophageal speech
  - Tracheoesophageal puncture with insertion of speech valves
  - Neoglottis surgical procedure
  - Artificial larynx battery devices
  - Speech therapy without the use of speech valves
25. Which of the following is true of salivary gland tumours?
- Warthin's A tumour is the most common benign tumour in the parotid
  - Adenoid cystic carcinoma is the commonest malignant parotid tumour
  - Gradenigro's syndrome is an important complication of surgery for tumour???
  - Large benign parotid tumours frequently present with facial nerve palsy???
  - Acinic cell carcinoma has a poor prognosis

### Section C

- hyposmia
- hypothyroidism
- hypertension
- obstructive sleep apnea
- Iron deficiency anemia

Match the numbers with the correct answers. Each option may be used once, more than once, or none at all.

- Trecher Collins syndrome
- Medullary carcinoma of the thyroid
- Post-cricoid carcinoma
- Pendred syndrome
- Esthesioneuroblastoma

1. Which of the following conditions is unlikely to cause otalgia?
  - a. Acute Tonsillopharyngitis
  - b. Fish bone at the base of the tongue
  - c. Hypopharyngeal Cancer
  - d. trigeminal neuralgia
  - e. BPPV
2. The most common lodging site for a fish bone stuck in the throat is?
  - a. Tonsils
  - b. Piriform recesses
  - c. Valleculae
  - d. Cervical oesophagus
  - e. Larynx
3. Obstruction of Stenson's duct may affect the
  - a. Parotid gland
  - b. Submandibular gland
  - c. Sublingual gland
  - d. Fossa of Rosenmuller
  - e. middle ear
4. The advised initial procedure in a 50-year-old patient with a painless neck swelling is:
  - a. Selective neck dissection
  - b. fine needle aspiration
  - c. incisional biopsy.
  - d. excisional biopsy.
  - e. do nothing.
5. Complications of an fish bone that has perforated the oesophagus includes all of the following EXCEPT?
  - a. Retropharyngeal pharyngeal abscess
  - b. Mediastinitis
  - c. Aorto-oesophageal fistula
  - d. Barretts oesophagus
  - e. Pleural effusion

6. 60 year old woman presents to A&E for severe epistaxis. BP is 170/110 and Hb is 10.3g/dl. On examination there is bleeding on the anterior part of the nose and nasopharynx. You use an anterior pack to pack the nose, but the blood soaks through it. You would now:
- Use another anterior mercoel pack
  - Pack posteriorly as well as anteriorly
  - Give 2-3 units of fresh blood
  - Give anti-hypertensives to see if bleeding abates
  - Refer to ENT for ligation of the ethmoidal and internal maxillary arteries
7. The most common thyroid cancer to spread via lymphatics is
- Papillary thyroid carcinoma (PTC)
  - Follicular thyroid carcinoma (FTC)
  - Hurtle cell carcinoma (HCC)
  - Mucillary thyroid carcinoma (MTC)
  - Anaplastic thyroid carcinoma (ATC)
8. The best treatment for pleomorphic adenoma in the deep lobe of the parotid gland is:
- observation
  - excisional biopsy
  - superficial parotidectomy
  - total parotidectomy
  - radiotherapy
9. The following are absolute indications for tonsillectomy EXCEPT
- Spontaneous hemorrhagic tonsillitis
  - Suspicion of malignancy
  - Obstructive sleep apnea with cor pulmonale
  - Failure to thrive
  - Recurrent tonsillitis
10. The first step in the management of A four-year-old child with a foul smelling unilateral nasal discharge is
- Syringing of both nostrils to rule out a foreign body
  - Empiric antibiotics
  - A thorough examination of both nostrils with suction and a nasal speculum
  - A swab for culture and sensitivity so that culture directed antibiotics can be given
  - CT of the nose and paranasal sinuses

11. The waters view x-ray best shows the

- a. Sphenoidal air sinus
- b. Ethmoid sinuses
- c. Maxillary sinus
- d. Mastoid air cells
- e. Frontal sinus

12. The most common site of epistaxis is

- a. Posterior segment of the nose
- b. Woodruffs plexus
- c. Lateral nasal wall
- d. Roof of the nose
- e. Anterior inferior nasal septum

13. All the following are typically associated with viruses, EXCEPT?

- a. Ramsay hunt syndrome
- b. Nasopharyngeal carcinoma
- c. Epiglottitis
- d. Mumps
- e. Croup (Laryngotracheobronchitis)

14. The most bacteria responsible for Acute Sinusitis in Adults include:

- a. Pseudomonas, proteus
- b. Rhizobacterium, bacterioides flagilis,
- c. Streptococcus, Hemophilus influenzae, M. catarrhalis
- d. Staphylococcus aureus, Streptococcus pyogenes
- e. Streptococcus Viridans

15. Meniere disease has which of the following features

- a. Conductive hearing loss
- b. Otorrhea
- c. Otalgia
- d. Severe frontal headache
- e. Episodic vertigo

16. A young patient presents with recent onset of a midline neck mass which moves on swallowing and tongue protrusion. The most likely differential diagnosis is?

- a. Lipoma
- b. Lymph node
- c. Branchial cleft cyst
- d. Dermoid cyst
- e. Thyroglossal duct cyst

17. A 3-year-old boy is brought to A/E by his mother who reports that the child swallowed a coin. Since then he has been unwilling to eat or drink anything and is constantly salivating. An lateral C-spine & AP chest X-ray is ordered. What is the most likely site of impaction?

- a. Midoesophagus
- b. Oropharynx
- c. Stomach
- d. Nasopharynx
- e. Cricothyroid

18. The least likely complication to occur after performing a tracheostomy is

- a. Surgical emphysema
- b. Tracheo-oesophageal fistula
- c. Bleeding
- d. Hypocalcemia
- e. Hypoxia

19. Identify the CORRECT statement about Acoustic Neuromas/Vestibular Schwannoma?

- a. 2<sup>nd</sup> most common cerebellar pontine angle tumor
- b. usually causes a bilateral sensorineural hearing loss
- c. associated with hypoesthesia of the posterior meatal wall
- d. after the 8th nerve, the Facial Nerve is the most common cranial nerve to be affected
- e. Vertebral angiography is the gold standard method of imaging



20. A 32-year-old male presents with a complaint of deafness and a neck mass. He has a dull right tympanic membrane on physical examination. What type of curve would you expect on impedance tympanometry?
- Type A
  - Type B
  - Type C
  - Type Ad
  - Type As
21. Identify the correct statement regarding Glomus tumors of the ear
- Associated with a positive schwartz sign
  - Most commonly occurs in the epitympanum
  - Treatment of choice is Radiotherapy
  - Glomus jugulare can be differentiated from glomus tympanicum by CT
  - Bloody otorrhea is the most common presenting complaint
22. A 30-year-old male is referred to the clinic with a 3-day history of facial nerve palsy. He has no chronic illnesses. Examination is otherwise unremarkable. The best course of treatment is?
- Ciprodex ear drops
  - Facial nerve decompression
  - observation
  - Acyclovir and prednisone
  - Vasodilator and vitamin B
23. Regarding the physiology of hearing which of the following statements is correct?
- Endolymph is secreted by the stria vascularis
  - Perilymph is rich in potassium ions
  - Endolymph fills the space between the bony and membranous labyrinth
  - Perilymph is secreted by the Organ of corti
  - The basilar membrane vibrates at a higher frequency close to the helicotrema
24. All the following medications have been known to cause ototoxicity EXCEPT
- Cisplatin
  - Amikacin
  - Gentamicin
  - Clarithromycin
  - Kanamycin

25. A 47-year-old woman complains of dizziness and left-sided hearing loss for several hours. She denies headaches, aural fullness, or tinnitus. Which of the following is her most likely diagnosis?

- a. Vestibular neuronitis
- b. Meniere's disease
- c. Labyrinthitis
- d. Vestibular schwannoma
- e. Benign paroxysmal positional vertigo

26. Which of the following statements is INCORRECT regarding Otosclerosis?

- a. can result in a conductive or sensorineural hearing loss
- b. May affect one or both ears and may worsen in pregnancy
- c. Treatment with Sodium fluoride therapy or bisphosphonates is the gold standard
- d. Can be treated with hearing aids in the early stages
- e. Surgical options include stapedectomy or stapedotomy

27. The Eustachian tube

- a. Is about 5-6 cm in length in adults
- b. Is mostly cartilaginous in its lateral 2/3<sup>rd</sup>
- c. amplifies sound in the range of 2-4 kHz
- d. Is opened by contraction of the tensor palatini muscle
- e. allows communication between the middle ear cavity and posterior nasopharynx

28. Sensory supply to the middle ear cavity is via the

- a. vagus nerve
- b. glossopharyngeal nerve
- c. facial nerve
- d. trigeminal nerve
- e. Auriculotemporal nerve

29.

31. 3-year-old boy presents with snoring, mouth breathing and sleep apnea. On examination, the tonsils are enlarged but the adenoids cannot be seen. The best way to evaluate the adenoids is ...

- a) sleep study
- b) soft tissue lateral X-ray of the post nasal space
- c) awake mirror nasopharyngoscopy
- d) direct palpation of the nasopharynx
- e) CT scan of the nasopharynx

32. A 10-month old infant was born premature and was intubated for 10 days. He was doing well for 6 months but for the last 4 months he developed progressively worsening inspiratory and expiratory (biphasic) stridor. On examination, there was audible biphasic stridor and muscle retractions.

The most possible diagnosis is:

- a) Laryngomalacia
- b) Congenital Subglottic Stenosis
- c) Acquired Subglottic stenosis
- d) Aortic arch
- e) Asthma

33. A man presents with a large cancer extending from the epiglottis to the false cords. You would expect him to have all the following, EXCEPT:

- a) Hoarseness
- b) Odynophagia
- c) Otolgia
- d) Dysphasia
- e) Lymphadenopathy

34. Which of the following investigations would you use to monitor medullary carcinoma of the thyroid after treatment?

- a) T3
- b) Thyroglobulin
- c) Calcitonin
- d) TSH
- e) Calcium

35. A 64-year old female with diet-controlled diabetes mellitus complains of a deep boring pain in her right ear for 1 week. On examination, there is a small amount of granulation tissue at the bony cartilaginous junction. The most likely diagnosis would be:
- Acute localised external otitis
  - Acute diffused external otitis
  - Acute exzemaoid external otitis
  - Malignant external otitis
  - Otomycosis
36. 3-year old boy with right ear pain for 3 days and fever of 38.5 degrees. The right eye cannot close and the mouth is crooked. What treatment would you give?
- mastoidectomy
  - mastoidectomy and antibiotics
  - IV antibiotics
  - Wide myringotomy
  - IV antibiotics and wide myringotomy
37. 35 year old woman complains of recurrent dizziness in which the room spins about, lasting for 2 – 4 hours. There is associated hearing loss and tinnitus. The likely diagnosis is:
- BPPV
  - Meniere's disease
  - Vestibular neuronitis
  - Basilar artery insufficiency
  - Acoustic neuroma
38. 8 year old woman presents with a rapidly enlarging mass which has been growing in the last 3 – 4 months. There is some early stridor. A chest x-ray shows lumps in the lungs. You would be most worried about
- Follicular carcinoma of the thyroid
  - Lymphoma of the thyroid
  - Medullary carcinoma of the thyroid
  - Papillary carcinoma of the thyroid
  - Anaplastic carcinoma
39. 24 year old undergraduate presents with a painful ulcer on the lateral part of the tongue. A 1.5 cm rubbery node is found in level 1. Your provisional diagnosis is:
- Lymphoma
  - Syphilis
  - Apthous ulcer
  - Squamous cell carcinoma
  - Geographical tongue

40. 6 week old infant presents with a lump in the right lateral neck. It is firm, fusiform and lies between the mastoid process and the sternal notch. The likely diagnosis is:
- a. medullary thyroid cancer
  - b. Pseudotumour of the sternocleidomastoid
  - c. Cystic hygroma
  - d. Dermoid
  - e. Branchial cleft cyst
41. 6-year old boy with recurrent mild epistaxis. It is precipitated by running about and bumping his nose. Examination reveals a crust on the nasal septum. You would recommend:
- a. anterior packing
  - b. external nasal compression
  - c. Silver nitrate cautery
  - d. Thermal cautery
  - e. Posterior packing
42. 54-year-old construction worker presents with gradual onset hearing loss. (Audiogram shown shows hearing loss of about 40dB with a dip in the 4kHz range. You would offer him:
- a. Cochlear implant
  - b. No treatment
  - c. Hearing aid
  - d. Surgery
  - e. Topical antibiotics
43. A 19-year-old college student presents to you with acute tonsillitis, occurring about 4 – 5 times a year for the past 3 years. She misses 3-4 days of school with each episode. You would recommend
- a. Monthly Prophylactic Antibiotics
  - b. Tonsillectomy only
  - c. Tonsillectomy and adenoidectomy
  - d. PO analgesics, desensitizing throat sprays and lozenges
  - e. Oral Antihistamines and oral steroids
44. Nasopharyngeal carcinoma most frequently metastasizes to which lymph node levels?
- a. I and II
  - b. II and III
  - c. III and IV
  - d. IV and V
  - e. II and V

45. A 60-year-old man with a long history of smoking and alcohol intake, presents with a painless lump in the neck. FNAC results proved inconclusive. What is your next step?
- Perform a CT scan of the neck
  - Perform panendoscopy +/- Blind biopsies
  - Tell the patient not to worry and discharge him
  - Perform incisional biopsy on the lump
  - Perform excisional biopsy of the lump
46. A 44-year-old man complains of foul smelling discharge from his ears for a few months. Otoscopy reveals white debris in the external ear canal. The most definitive treatment is:
- Antibiotics
  - Myringoplasty
  - Aural toilet
  - Modified radical mastoidectomy
  - Tympanoplasty
47. A 45-year-old lady complains of unilateral progressive hearing loss and tinnitus over the course of 3 years. Head and neck examination is normal. The most likely diagnosis is:
- Acoustic neuroma
  - Nasopharyngeal carcinoma
  - Drug ototoxicity
  - Noise induced deafness.
  - Presbycusis
48. You would choose to do an emergency tracheostomy in which of the following situations:
- A 2-year old infant with a foreign body in the right mainstem bronchus
  - A 6-month old infant with expiratory stridor and wheezing
  - A 6-month old newborn with cleft palate and micrognathia with moderate cyanosis.
  - A 6 day old infant with a 2mm congenital subglottic stenosis and biphasic stridor.
  - A 3-year old child in the Emergency department with severe bleeding head injury after a road traffic accident.
49. A 73-year old man with uncontrolled hypertension presents to the A&E with severe right-sided epistaxis. The initial step management would likely require
- Anterior nasal pack with Merocel
  - Giving urgent anti-hypertensive medication
  - Assessment of airway, breathing and circulation
  - Electrocautery of sphenopalatine artery
  - Ligation of internal maxillary artery

50. An 18-yr old male complains of drainage from his left ear 3-4times per year which last 1-2 weeks. There is no pain, but he has noted some hearing loss in the left ear. On examination, the ear canal is dry and the tympanic membrane is normal except for a small amount of cerumen-epithelial debris above the short process of the malleolus. You would be concerned that there may be :
- a. A glomus tumour
  - b. A Labyrinthine fistula
  - c. A Cholesteatoma
  - d. A Cholesterol Granuloma
  - e. Cerumen Impaction
51. The best next step in the management of the patient above is?
- a. Tympanomastoid exploration
  - b. I.V. antibiotics and follow up after a month
  - c. Tympanoplasty
  - d. CT scan of the temporal Bones
  - e. Pure tone Audiogram
52. A 38 yr old male presents to the clinic with NPC. Which will be the first group of lymph nodes you would expect to be involved with metastasis?
- a. Level 2
  - b. Level 3
  - c. Level 4
  - d. Level 5
  - e. Retropharyngeal nodes
53. A major characteristic of adenoid cystic carcinoma of the salivary glands is its propensity to
- a. Metastasize to regional lymph nodes
  - b. Metastasize to lungs
  - c. Invade local tissues only
  - d. Invade and spread along nerves
  - e. Metastasize to bone
54. A 50yr old male presents with a left sided nasal mass, obstructing the nose which bleeds easily when touched. There is no pain. You would recommend
- a. Biopsy of the lesion
  - b. Sinus X-rays
  - c. Course of Antibiotics and nasal steroid spray for 2 weeks
  - d. Coronal CT scans of sinus
  - e. Have patient return in 2 weeks

55. The most common complication of endoscopic sinus surgery is?

- a. Blindness
- b. Transient oculomotor palsy
- c. Orbital haemorrhage
- d. Enophthalmosis
- e. Nasal bleeding